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ANNUAL REPORT OF THE LIBRARIAN 1907

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ANNUAL REPORT

OF THE

LIBRARIAN

1907

(Reprinted from the President's annual report to the Board of Curators, 1907-08, with an appendix.)

LIBRARY COMMITTEE.

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LIBRARY STAFF.

Henry Ormal Severance, A. M., Librarian.
Walter King Stone, A. B., First Assistant Librarian.
Grace Lefler, B. L. S., In charge of Catalogue.
Grace D. Phillips, B. L. S., In charge of Periodicals.
Bertha J. Bond, A. B., B. L. S., Cataloguer.
Clarence W. Sumner, In charge of night service.
Elizabeth Sinclair, B. L., Charging clerk.
Blanche Hedrick, Accession clerk.
Maude Higginbottom, Stenographer.

LIBRARIANS OF THE UNIVERSITY.

Robert S. Thomas, A. M., 1850-1853.
Bolivar S. Head, A. M., 1853-1860.
Edward T. Fristoe, A. M., 1860-1862.
Joseph Granville Norwood, A. M., M. D., 1862-1877.
Scott Hayes, M. S., M. Ag., 1877-1879.
Edwin J. Jolley, M. S., 1879-1880.
J. H. Drummond, A. B., A. M., 1881-1887.
John Watson Monser, 1887-1896.
Walter King Stone, A. B., 1896-1900.
James Thayer Gerould, A. B., 1900-1906.
Henry Ormal Severance, A. M., 1907—.

XV. THE UNIVERSITY LIBRARY.

To the President of the University of Missouri:

SIR: I have the honor to submit, herewith, my second annual report as librarian of the University of Missouri. The report really covers the work of the library under the first year of my administration, as I had been librarian only four months when the first report was made. The statistics are for the calendar year 1907, and include the libraries at Columbia.

Stack Room.

A year ago the condition of the book stacks of the library was anything but desirable. All the available space for books seemed to be utilized, all the shelves were either full or soon filled after my arrival. Furthermore the books were so scattered that it was impossible to render the public efficient service. The volume wanted might be in the stacks, in the librarian's office, in the south hall, in the north hall, in the periodical room, in the so-called "dark room" on the first floor, in the document room on the second floor, in the store room on the third floor, or in any one of the dozen branch libraries. Under these conditions it was impossible to serve a reader with expedition or with any degree of satisfaction. Furthermore the congestion in these various rooms was so great that it was impossible to get a desired book in a reasonable length of time. Books and pamphlets were literally stacked up in the various rooms from the librarian's office to the dark room on the third floor. My first request of the Executive Board, therefore, was that the basement room, the old gymnasium under the Reading room, should be fitted up for a stack room and that the books then scattered over the various rooms of Academic Hall should be brought together in one place. The request for the privilege of moving the stacks was granted at the July meeting but not the privilege of occupying the commodious room in the basement.

During the month of August the stacks were moved into the rooms south of the main corridor, formerly occupied by the offices. The catalog room, the librarian's office, the so-called "dark room" and the south hall were cleared and the rooms filled with book stacks. We were able to place in the stacks and in the adjoining rooms and in the Reading room practically all of our books that are in constant demand. Within two years other accommodations will have to be provided. The offices were transferred to the north corridor and the room formerly occupied by the periodicals.

In August the Executive Board authorized the relighting of the room into which the stacks were placed and some new fixtures for the south end of the Reading room where the stacks were formerly located. Hitherto the alcoves in the stacks were so poorly lighted that it became necessary either to take up the books from the lower shelves and carry them to the passage way and hold them up to the light to read the titles or to strike matches in the alcoves, which was a very dangerous proceeding. The new arrangement of lighting, however, is quite satisfactory. There are two drop lights with concave reflectors in each alcove. The south end of the Reading room is lighted by six clusters of four lights each with prism glass shades and reflectors. Each cluster is suspended from the ceiling by a chain about four feet in length.

The Board also authorized the construction of 106 linear feet of book shelves seven and one half feet high along the wall spaces of the Reading room and 68 linear feet of pigeon hole cases 6 feet high to be placed against the walls in the south end of the Reading room. The pigeon holes will accommodate 640 periodicals and the book shelves will carry between 5000 and 6000 volumes. The shelving was put in place early in September; the pigeon hole cases several months later. The cases and the shelving together cover practically the entire wall space of the Reading room.

Reference Collection.

The first problem that I undertook to solve on taking up my duties was to prevent the congestion of the students in the stacks back of the Delivery desk at the time of the movement of classes. Every student was allowed to go to any part of the stack room for any purpose at any time. The books that were reserved for class use were placed on the shelves just back of the Delivery desk. The congestion was caused by the students rushing into the library at the end of the recitation and trying to be first to get a book to which the professor had just referred the class. The solution of the problem was to move this class of books into the Reading room where students could reach them without the formality of writing out charging slips. The new cases built around the Reading room in August enabled us to make this change early in September. A majority of these books in constant demand were placed on the open shelves in the Reading room. Along with these were placed certain standard works together with strictly reference books and a majority of the sets of general periodicals indexed in Poole. These form the nucleus of the collection.

The reference library now contains about 5000 volumes, including the collection of indexes and the text-book library which are shelved near the catalog case by the east entrance to the room. A separate shelf list of this collection was made, duplicating the one in the cataloging room. It is placed on the end of the Delivery desk where it has been found very useful in locating books. Notwithstanding the fact that some of the books disappear temporarily from the shelves at examination time, there is no doubt of the success of the innovation. Where there is only one copy of a book to which a large class has been referred, the book is placed behind the delivery desk and issued by slip only. This change has been welcomed by the student body and by the faculty also. One indication of the appreciation of this new arrangement is the larger use that is being made of the library.

Reading Room.

The periodical room which was formerly kept open only seven and one-half hours per day has been turned into a work room for the catalogers. The current periodicals have been shelved in the south end of the Reading room in cases made especially for them. The assistant in charge of the periodicals has moved her desk to the south end of the Reading room in close proximity to the periodicals and is able to give considerable time to reference work. The periodicals are thrown by classes, the names of which are posted above the pigeon holes containing the magazines. Label holders have been secured for each pigeon hole and the labels containing the names of the periodicals are being printed for them. Large brass labels above the book shelves in the Reference collection indicate the location of the several classes of books. Name plates have been added to the several portraits hanging on the walls in the Reading room.

The large delivery desk separating the stacks from the Reading room has been reduced in length and squared around in front of the door leading into the new stack room. Gates have been placed at each end and only students who ask for the privilege are allowed to enter the stack room. The requests for stack room privileges are few, a fact showing that the books which a student really needs are on the reference shelves or can be had by applying at the desk. To be deprived of free and promiscuous use of the stacks has been no hardship to him. The stacks are kept in better shape than before, the books are more often and more easily found.

A new dictionary case made by the University carpenter has been placed in the center of the room and contains practically all the dictionaries in the library. The top of the case slopes each way from the middle, making a convenient rest on which to lay the books while consulting them.

An exhibition case stands in front of the Delivery desk. On this case are placed all new books just before they go to

the stacks. This gives the faculty and students an opportunity to see all the new additions before they are placed on the shelves in the stack room. Expressions of appreciation of this innovation have come to me from both students and faculty. The increase in attendance has necessitated additional chairs and tables. Three dozen chairs and two large Flemish oak tables have been added to the Reading room.

Upon my recommendation the Executive Board authorized the enclosing of the lower end of the west corridor to provide additional room for the library. The catalog cases will be located in this new room and some of the index books will be shelved here. It is hoped that the students will make use of this room for consultation purposes, thereby relieving the Reading room of considerable commotion.

The gentlemen's wardrobe which occupied the east wall of the Reading room, now occupies a place in this new room. This, however, is not adequate, neither is this arrangement desirable. The entire space allotted to the library is sorely needed for library purposes. Cloakroom accommodations should be provided elsewhere.

Inspection Books.

During the summer, arrangements were made with G. E. Stechert & Company, and with the Macmillan Company, whereby they send to the library at irregular intervals, all their publications for the inspection of the members of the Faculty. These books may be purchased by individuals or by the library. Those remaining unsold are returned to the publishers every three months.

This innovation has proved to be a boon to the Faculty. It gives them an opportunity to examine books in their lines of work before buying them or recommending them for purchase to the library.

Library of Congress Catalog.

In my last report a brief statement was made relative to the card catalog of the Library of Congress. The Manila proof sheets were received early in June and were cut into cards by the Stephens Publishing Company. There were upwards of 150,000 of them. They were thrown into a rough alphabet by several young lady students, for which the Executive Board appropriated $175.00 from the student fund. The final alphabeting has not yet been completed.

Before the Library of Congress began printing these proof sheets about 50,000 cards were issued. In order to have our catalog contain all titles of books in the Library of Congress, steps were taken to secure these additional cards. Mr. Putnam, the Librarian of Congress, has acceded to my request and has authorized the sending of the cards spoken of above to this library gratis. When these cards have been received and alphabetted with those we now have our catalog of the Library of Congress will be complete. This catalog is an alphabetical list of all the books in this great collection containing one and one-half million volumes.

The catalog will facilitate the ordering and lessen the expense of the L. C. printed cards for our public catalog. These cards represent the best form and method in card making. Books may be borrowed from this library. This catalog, therefore, enables him to ascertain, without writing to Washington, whether the book wanted is there.

Budget.

The division of funds for the biennial period 1907-08, as recommended by the librarian and passed by the Executive Board, was made on the same basis as that of the previous biennial period. This distribution is not wholly satisfactory. It is hoped that a larger appropriation may be secured from the General Assembly in 1909 so that every department may be enabled to secure all the books needed for its work. The

following letter to the Executive Board shows the distribution of funds as estimated for 1907-08. Later in the year the Executive Board apportioned $50 for books for the Debating team, $50 for the Department of Physical training and $75 for Journalism besides several appropriations for special purposes:

Columbia, Mo., April 5, 1907.

To the Executive Board,
University of Missouri,
Columbia, Mo.

Gentlemen:

I beg to submit the following report on the division of the Library funds for the two years, 1907 and 1908.

Income.

The estimated income of the libraries for the biennial period is as follows:

From the Collateral Inheritance Tax	$ 18,000.00
From fees based on the income for 1905-6.....	
From Academic department	6,055.00
From A. & M. College	1,643.00
College of Medicine	1,490.00
College of Engineering	2,850.00
College of Law	4,540.00
College of Law, special appropriation	5,000.00
Teachers College	725.00
	$40,303.00

The cost of maintenance of the library, the equipment and the appropriation for Mr. Switzler's History of the University of Missouri should be shared by all departments alike. The binding of periodicals and the repair of books, subscriptions to periodicals, and the purchase of reference books should be borne by all the departments.

I would therefore recommend that the income from the Collateral inheritance tax be applied to provide for the main-

tenance and other objects as stated above and the amount of the fund not used for this purpose be left for expenditure at the discretion of the Board, for salaries, clerical help, the purchase of sets of scientific periodicals and transactions of learned societies, etc.

The amount to be provided for is as follows:

Salaries	$ 7,500.00
Equipment and Supplies	800.00
Switzler's History	800.00
Bindings	3,000.00
Subscriptions to Periodicals	4,000.00
Reference Books	500.00
	$16,600.00

According to the estimate of Mr. Gerould 17 per cent of the work of the Medical course, 30 per cent of the work of the Agricultural course, 33 per cent of the work of the Engineering course, and 50 per cent of the work in the Teachers College are given by men whose departments are reckoned as academic. Consequently, in the allotment of funds a certain per cent of the fees of each of these departments should be placed at the disposal of the Academic Department, or of the men who are in two departments. I would, therefore, suggest that 10 per cent of the Medical, 20 per cent of the Agricultural, 20 per cent of the Engineering, and 20 per cent of the Teachers College funds be added to the Academic funds. Making the computations accordingly the results are as follows:

Academic department	$ 7,247.60
A. & M. College	1,315.40
College of Medicine	1,341.00
College of Engineering	2,280.00
Teachers College	580.00
College of Law	9,540.00

If the fees in any of the departments exceed the amount estimated, they can be reapportioned on the same basis.

I would recommend that the amount to be received from fees, based on the income for 1905-06 be apportioned in a lump sum to each department, except the Academic to be apportioned by the Dean and Faculty of each department.

I would recommend the following division for the Academic funds: $500 to History; $400 to English; $300 to each of the following: Archaeology, Astronomy, Botany, Chemistry, Economics, General list, Geology, German, Greek, Latin, Mathematics, Philosophy, Physics, Political Science, Romance Languages, Sociology, Zoology; $200 each to Current Literature, Psychology, Religious books; $100 each to Bibliography, Elocution, Free-hand Drawing, President's list.

Very truly yours,

Librarian.

The following table shows the expenditures of the library for 1907, exclusive of the Law library, which has a separate account:

RECEIPTS.

Cash on hand January 1, 1907	$ 4,938.47	
Fees	7,404.55	
Inheritance Tax	9,000.00	
Total		$21,343.02

EXPENDITURES.

Salaries and help	$ 4,978.05	
Switzler's History	400.00	
Equipment and supplies	364.55	
Binding and repairs	1,195.38	
Periodicals	2,441.06	
Books	7,909.64	
Total	$17,388.64	
Cash on hand January 1, 1908	3,954.38	
		$21,343.02

ACCESSIONS.

Total number of volumes in all the libraries at Columbia, December 31, 1907	81,563
Pamphlets not accessioned (estimated)	20,000
Total	101,563

During the year there were added to the various libraries of the University, at Columbia, 9013 volumes, distributed as follows:

General library	5,696
Agricultural library	263
Engineering library	392
Law library	1,699
Medical library	632
Lathrop library	331
Total additions	9,013

The total number of periodicals currently received is 1054, of which 523 are gifts and 531 were received through subscription.

The number of accessions for 1907 exceeds the number for any one year in the history of the library except the year 1903-4, when the Senator Vest collection of documents was accessioned. The number this year is a normal growth. There were no large gifts presented, although a considerable number of volumes had accumulated, waiting to be recorded.

Of the accessions to the General library 1595 were received as gifts or in exchange. Of the accessions to the Agricultural library 199 volumes were gifts. There were also gifts of 41 volumes to Engineering library and 33 volumes to the Law library. The Medical library received by gift and exchange 264 volumes.

The number of volumes added as the result of binding periodicals during the year was 1028.

The important purchases during the year includes several sets of reference works, and several sets of periodicals, and the transactions and proceedings of scientific and literary societies as follows:

Hastings, Dictionary of the Bible, 5 vols.	$ 25.00
Historians history of the world, 25 vols.	50.00
Jewish Encyclopedia, 12 vols.	75.00
McCarthy, Irish Literature, 10 vols.	15.00
Moulton, Library of literary criticism, 8 vols.	25.00
Deutsche litteratur denkmaler des 18 u. 19 Jahrhundert, 135 vols. bound in 15 vols.	40.75
Goethe—Jahrbuch, 26 vols.	42.50
Heyse, Paul, Gesammelte werke, 31 vols.	29.75
Jahresbericht der Germanischen philologie, 25 vols.	56.22
Jahresberichte fur neuere-deutsche litteraturgeschichte, 10 vols.	68.00
British Assc. for the advancement of science, Reports, 73 vols.	70.00
Nature (to complete set) 42 vols	40.00
Notes and queries, 121 vols.	196.70
Physical society of London, Proceedings, 17 vols.	52.50
Royal society of London, Philosophical transactions, 1860-1886, Section A 1887-1900	214.00
Deutsche Shakespeare gesellschaft, Jahrbuch, 42 vols.	87.00
Munich K. b. Akademie der wissenschaft. Sitzungsberichte der philosoph-philologisch. Historisch. Klasse 1860-1901, 43 vols.	50.00

The total number of volumes received as gifts or as exchanges during the year were 2132 volumes and 2151 pamphlets. These represent a large number of donors, but those who have given any considerable number are few. One of the most valuable gifts of the year was made by the French government through the Minister of Public Instruction. The nature of the gift is indicated by the following letter:

July 12, 1907.

The Executive Board,
University of Missouri.

Gentlemen:

I beg to advise you of the gift of the following works which have been presented to our library, through the solicitation of President Jesse, by the Minister of Public Instruction and Beaux-Arts, France:

First, Collections de documents inedité sur l'histoire de France.

Second, Inventaire général des rechesses d'art de la France.

Third, Catalogue général des livres imprimés de la Bibliotheque Nationale.

The first set is a very valuable one for historical research. It is still in the course of publication, although sixty-two volumes have already been printed. The second work is important to lovers of art. Twenty volumes have already appeared. This work is also continuous, a volume or more being published each year. The last work is one of the great bibliographical undertakings of the twentieth century. Twenty-eight volumes have already been published and two or more volumes per year may be expected for the next fifteen or twenty years.

Respectfully,
Librarian.

Dr. Graves, on leaving the University, presented a collection of 166 volumes, mostly text-books in the Greek and Latin languages. The Honorable D. H. Shackelford sent the library several hundred volumes of government documents.

The following is a list of donors who have given twelve volumes and pamphlets or more to the library during 1907.

	Vol.	Pam.
Alexander, Carter	1	11
Brockhaus, F. A.		19
Canada geological survey		53
Heath, D. C. & Company	13	9
Iowa, Secretary of State	1	20
Iowa State Library Commission	1	12
Jesse, R. H.	2	42

Library of Congress	9	3
Manly, W. G.	1	16
Massachusetts, School for the Feeble-minded		22
Michigan Agricultural College	25	102
Michigan Dairy and Food Commission	2	108
Michigan, Supt. Public Instruction	20	1
Michigan State Treasurer	2	30
Myer, Max W.	4	11
New York City. Charity Organization Society		66
New York. State Board of Charities	47	
North Carolina. Geological Survey		25
Ohio. Board of State Charities		26
Ohio. State Reformatory		15
Stone, Senator Wm. J.	21	
Westinghouse Manufacturing Company		32
United States. Superintendent of Documents	44	11

Our duplicate room remains untouched as regards a list of the books, pamphlets and periodicals contained therein. It has therefore been impossible to arrange an extended exchange of duplicate books. The exchange of publications, however, has been gratifying. Included among these are the following institutions with the number of volumes and pamphlets donated by each:

	Vol.	Pam.
Breslau, Konigl. u. Universitäts-Bibliothek		25
Chicago. University		37
Colorado College		17
Colorado. State Library	1	19
Connecticut. State Library	12	9
Giessen, Universitäts Bibliothek		51
Gottingen, Universitäts-Bibliothek	1	154
Jena, Universitäts-Bibliothek		196
Johns Hopkins University		26
Marburg, Königliche Universitäts-Bibliothek		105
Michigan. University. Library		31
Montana Historical Library	7	16

New York State Library	16	16
Pennsylvania. University. Library	3	13
Rio de Janeiro, Bibliothèque Nationale		10
Rostock, Universitäts Bibliothek		88
Strassburg Universitäts & landes-Bibliothek		18
Toronto. University	1	15
Wurtzburg, Universitäts Bibliothek		110

The John H. Lathrop Memorial Library.

This collection of books was made possible through the generous gift of $1,000 of the Honorable Gardiner Lathrop, President of the Board of Curators. Two installments of $250 each have already been received, the first on May 14, 1906, the second on April 12, 1907. There have been expended on this fund to date $483.52 and the total number of volumes purchased is 674. The collection is shelved in the office of Dr. E. A. Allen and consists of works in English and American literature.

The Catalog.

The total number of cards added to the catalog during the year is 14,007 of which 5,870 were Library of Congress printed cards, and 8,137 were typewritten. These represented 2,501 titles and 3,533 volumes. There were 5,882 volumes added to the cards already in the catalog, making a total number of 9,415 volumes cataloged during the year.

With few exceptions the pamphlets which have accumulated during the year have not been cataloged. It has been impossible to do anything with them as the entire time of the force had to be given to the preparation of the bound volumes for the shelves. The number of volumes cataloged is more than double the number cataloged the year preceding.

Circulation.

It is gratifying to note the increased use that is being made of the library. There is a larger number of readers than ever before and the number of books used exceeds that of any previous year.

Under the new regulations which went into effect in September, the library has been open twelve and one-half hours per day—7:55 A. M. to 5:30 P. M., and from 7 to 10 P. M. Sunday 2 to 5 P. M. During the year the Reading room has been closed only five days—New Year's day, Fourth of July, Thanksgiving day, Christmas day and one day for cleaning.

Unfortunately, for statistical purposes, no record has been kept of the number of volumes used by readers. The reader's slip is handed back to him on the return of the book borrowed. This arrangement was varied for three consecutive days and the result showed an average of 626 volumes per day borrowed at the desk. Since the establishment of the Reference collection, the number of volumes drawn at the desk represents not more than half of the circulation as a considerable number of the books in constant use are shelved in the Reading room where they can be used without the formality of a charging slip. The circulation, therefore, in the General library amounts to about 1,000 volumes per day.

Furthermore the number of readers constantly using the library is some indication of the service the library is rendering. The average daily attendance for September, October, November and December, taking the count at 10 A. M. and 8 P. M. is 87. The highest number in the Reading room during the day at the 10 o'clock count was 170 and at 8 P. M. 112 This is an increase of 50 per cent in attendance over last year. The Sunday attendance has more than doubled.

An effort was made in May to have all the books drawn out on personal accounts returned to the library. It was found that a large number of volumes had been drawn out five or six years ago by members of the teaching force and had never

been returned to the library. Many of the volumes returned had been "lost books" as no charge was on record against the borrower. In several cases the books charged could not be accounted for by the borrower. The records, however, were finally cleared up. With the new rule that all books must be returned before Commencement day each year, little difficulty along this line is anticipated.

It is interesting to note to what extent the borrowing had gone. One professor had in his possession 220 volumes, another 175 volumes, a third 116 volumes and others a smaller number varying from one to 100 volumes.

The library has been able to supplement its collection through the kindness of other libraries. Thanks are due to the following libraries for the loan of the number of volumes set opposite their names:

University of Chicago	16
Columbia University	7
Harvard University	12
University of Kansas	2
University of Michigan	17
Missouri Botanical Garden	4
United States Surgeon General's Office	83
United States Department of Agriculture	2
Yale University	6
Total	149

This library has been of service in loaning books to non-resident students doing graduate work, to private citizens and to institutions as follows:

	Vols.
Helen F. Bridges	2
University of Minnesota	1
Mr. B. M. Anderson, Jr.	2
Mr. Ernest F. Bush	2
Mr. J. G. W. Fischer	1

Missouri School of Mines	5
Miss Nell Jasper	2
Miss Emma McWilliams	2
Professor J. W. Million	1
Warrensburg State Normal	1
Mr. A. S. Chessin	1
Mr. Rush C. Lake	1
Total	21

Binding Report.

The number of volumes bound last year in the several styles of binding is indicated by the following:

No. of volumes bound in cloth	362
No. of volumes bound in duck & buckram	602
No. of volumes bound in Morocco, roan, Russia, cowhide, etc.	1175
Resews, old cases, etc.	42
Total number of volumes bound	2181

Of this number 1,028 were the result of binding periodicals. The total cost of binding for the year was $1,195.38.

Departmental Libraries.

There has been several changes in the administration of the departmental libraries. All the catalog cards for books in these libraries are being marked with the name of the departmental library where the book is shelved. Hitherto all books except those in the Law library were cataloged for the General library and then charged out to the department. This created no end of confusion, as the book clerk would look on the shelves first, then search the charging tray to locate the book. All this trouble will be obviated as soon as the catalogers can get the cards changed.

The users of these branch libraries have been at a disadvantage as there has never been a separate catalog or index or printed list of the books in any department. When a collection, isolated from the General library, reaches 2,000 volumes, there should be a card index or a dictionary catalog for use in the room where the collection is located. It would also be an advantage to have related subjects cataloged in the same file. To illustrate, many of the books shelved in the Zoological laboratory are wanted for reference in the medical library. If the investigator in human anatomy has an index at hand showing him where books on related subjects are shelved, it would save much time and place the material in his reach.

The work has been begun. A card index arranged by subjects has been placed in the Engineering library. The work will be pushed forward as fast as we can get help to do it.

In October the librarian, with the consent and cooperation of the Department of Chemistry, opened the Chemical library for the use of faculty and students. There is no one in attendance while the room is open. This collection is shelved in the tower of the Chemical building, reached by three flights of stairs. Hitherto, the books were under lock and key. If a student wished to consult a chemical dictionary, or read a description of an experiment that he was performing, he would need to search the building for a professor or the janitor, borrow his key, ascend to the tower room, consult the dictionary or read his article, descend and return the key. The inevitable result was that the books were little used. They were practically inaccessible. Throwing the room open to students does not obviate the whole difficulty. The library is too far from the laboratory. A room on the first or the second floor should be fitted up for the library with ampler accommodations.

One other library, the Geological collection, is without attendants, but it is open practically all day. There was no loss of books from this collection last year.

The Zoological collection of books has been moved out of Dr. Lefevre's office into a room fitted up especially for the purpose. It now assumes a different aspect. It is a library for the department and not merely for the professor in charge of the department. This library is open most of the day and a large number of evenings. Whenever any member of the teaching force is present the library is accessible.

Several departmental libraries are in charge of the stenographers for the respective departments. On the whole the arrangement is more satisfactory than those in charge of students. Such libraries are the Agricultural, the Experiment Station, the Horticultural and the Dairy libraries. These libraries are open during the day while the stenographers are on duty.

The departmental libraries were all checked up in June with the charges against them. In all the branch libraries there were 313 volumes that could not be accounted for, which were in those libraries the year previous. The first inference might be that those collections unguarded and those under supervision of students would show the greater loss. This is only true in part. The Engineering library and the Medical library, under student supervision, lost 76 volumes and 46 volumes respectively, while the Agricultural library and the Horticultural library, under much stricter supervision, lost 81 volumes and 16 volumes respectively. It might be said, in justice to the Agricultural library, that the collection was not checked a year ago and that only a part of the books were under any supervision before that time.

There were sixty volumes of Chemical books unaccounted for and this library was under lock and key. The books in the Geological laboratory and in the Romance Seminary, with no assistant in charge, and with very little supervision, lost only 4 volumes and 12 volumes respectively. It is very evident from the foregoing that the fault is partly in the system and

that members of the faculty as well as members of the student body, borrow books without leaving a record and that they forget to return them.

The Agricultural Libraries.

The books belonging to the College of Agriculture are very much scattered. The main library is in the Agricultural building and contains about 2,000 volumes. This library is cared for by the stenographer to the department of Animal Husbandry. The library is open seven and one-half hours per day—8 to 12:30 and 2 to 5.

The number of periodicals currently received in this library is 124.

This library has been increased by 263 volumes during the year of which 199 were gifts. A large number of herd books have been added, many of which were gifts. Among such gifts might be mentioned that of the American Poland-China Record, 51 volumes, presented by the American Poland-China Record Association.

The other collections belonging to the College of Agriculture are shelved, some in the Horticultural building, some in the Live Stock building, and others in the Dairy building.

The fund apportioned in a lump sum to the College of Agriculture for library purposes for the biennial period was $1,315.40. One-half of this amount, together with an unexpended balance was distributed among the several departments for the year 1907-08, as follows:

Agricultural Chemistry	$ 180.00
Agronomy	50.00
Animal Husbandry	175.00
Botany	150.00
Dairy	60.00
Dean's list	45.00
Home Economics	50.00
Horticulture	75.00
Veterinary	50.00

Engineering Library.

Open from 9—12, 2—4:30, 7—10; 8½ hours daily.

Number of volumes added during the year.

By purchase	351
By gift	41
Total	392

Total number of volumes in the library, Dec. 31, 1907....2028
Number of periodicals currently received is 40

The engineering library has been open an hour and a half per day longer than it was during the preceding year. This seemed necessary to meet the demands of the readers. The library has been under the immediate charge of four students: A. H. Reese, A. V. Elston, Goodman Bell, and R. I. Johnson. The responsibility has been divided among the four. While this has worked quite satisfactorily it is not the ideal arrangement.

The purchases for the year are not large owing to the lateness in the year when the orders reached the librarian. They will help to swell the total for 1908.

The funds apportioned in a lump sum to the College of Engineering for library purposes for the biennial period 1907-08 was $2,280.00. On recommendation of the Engineering Faculty this amount was distributed among the departments as follows:

Civil Engineering	$ 660.00
Electrical Engineering	660.00
Mechanical Engineering	660.00
Shop Work	100.00
Drawing	100.00
Mechanics	100.00

Hitherto this library has been strictly a reference collection, as far as the student is concerned, but with the beginning

one-half of her salary to be paid by the Law library. She has taken charge of this library from 8 A. M. to 12:30 P. M. since the department opened in September. The results of this arrangement have been very satisfactory. The books are prepared for the shelves more expeditiously and the students have a trained librarian to assist them in their reference work. The accessions for 1907 are more than twice as many as they were in 1906, and the indications are that the increase is normal and will continue at the same rate in future years.

This collection is the largest on the Campus outside of the General Library. The income for this library is one-fourth of the income for all the libraries on the Campus. The income is practically $5,000 per year. The full time of one assistant should be given to this work.

The library has been open nine and one-half hours daily except Sunday, during the college year. It has been under the immediate charge of Miss Bertha Bond who divides her time between the General Library and the Law library, and four students of law, J. E. Price, W. B. Bostian, W. W. Wright and Herbert Peck.

The transfer of the cataloging to the Law library has necessitated some new equipment in the way of a desk and chair for the librarian in charge, a new perforating stamp, new book plates and the like.

One of the purchases of last year is worthy of special mention. The New York Life Insurance Company offered their law library at Montreal for sale. Among other works this library contained a complete file of the Irish and Scotch reports—the reports of all the courts. The Boston Book Company purchased the entire library at a low figure and sold to the Law library of the University of Missouri, these two sets, containing 741 volumes, at the very reasonable price of $2,000.00.

The Staff.

In my last report your attention was called to the fact that the library staff was inadequate for the demands being made upon the library. During the year two assistants on full time have been added to the staff. The work which had accumulated before 1907 together with the new lines of work opened up during the year have demanded more time than the staff has been able to give to it.

At a meeting of the Executive Board on June 29th Miss Bertha J. Bond, of the University of Illinois, was appointed to the position of Cataloger in the General Library. Her time is divided between the General Library and the Law library and the salary is shared by both. The Law library has become so large and the additions so numerous that it became necessary to give at least half of the time of one assistant to the cataloging of the law accessions. Besides this work, she has full charge of the Law library from 8—12:30 daily.

On April 10th the Executive Board authorized the employment of a man assistant who should, among other duties, have charge of the night service and take the place of the night librarian after September 1st. It was impossible to secure a competent assistant at the salary offered. When the University opened in September the night service was very much crippled owing to the lack of sufficient capable help. The experiment of student help alone for the evening service was tried but was not satisfactory. The inexperience of the young men and the lack of acquaintance with the work rendered the service inefficient. Then, too, the work became so heavy that one person could not take care of it. Two students instead of one were then employed for the night service but still the demands for an assistant with a wider knowledge of books and able to assist students in their reference work were persistent. To meet this demand two of the young ladies of the staff were detailed for night work at the desk two nights a week each, to assist the student book clerk.

In the meantime the State Historical Society asked co-operation in cataloging the books in their library. It was finally decided to secure a young man who would be competent to take charge of the night service and to assist in cataloging the State Historical Society's library. Mr. Clarence W. Sumner of Earlham College was appointed an assistant for this purpose. He entered upon his duties January 2, 1908.

In addition to the work of the staff it has been necessary to secure certain clerical help and to employ three students a few hours per week. These students are:

Miss Alma Turner, who assists in the catalog department; E. L. Burge and B. E. Cowherd, assistants at the Delivery desk.

New Library Building.

The University has outgrown Academic Hall. Lecture rooms, class rooms and offices are badly needed. Rooms on the fourth floor and rooms in the basement have been fitted up for temporary use. There is no more available space. The quarters occupied by the General library and by the State Historical Society are badly needed for offices and lecture rooms. With the large increase in the number of students enrolled in the University some provision must be made for their accommodation.

The Library has outgrown the quarters assigned to it. Our Reading room, although it is one-third larger than it was last year, is already taxed to its full capacity. The stack room will barely hold the additions for another year. The room is now comfortably filled. The crowded condition of the Document room and the Duplicate room remains the same. All the college documents are shelved in the Duplicate room. There will be no alternative but to cord the books up on the floors and halls unless some additional room should be secured. The floor space allotted to the library for Reading room and stacks is no more than the space given to the Art

Museum or to the girls gymnasium and parlors. The University library could utilize twice the space it already has and have no floor room to spare. The library needs a larger reading room which can be secured only by securing a new building. The books which the library already possesses would fill a stack room with a floor space of 40x80 feet. With a good large stack room our books could be made available and more useful. A new building would provide seminary rooms so that the small collections so badly scattered could be brought together. A seminary room for advanced students of the languages and another for those in historical, economical, political and social sciences are badly needed.

The present day methods of teaching are much different than those in vogue five or ten years ago. The laboratory method now prevails. No student would expect to do creditable work in zoology or chemistry without apparatus. Even so the student of literature and history cannot expect to do creditable work in any of those branches without the necessary books at hand. They are his tools. Now that the University of Missouri has been admitted to the Association of American universities, some provision must be made for a strong graduate school as this provision is one of the conditions of entrance into the association. It is practically impossible to do graduate work without an adequate room well supplied with books on special lines. A new building would supply the University with suitable seminary rooms in close proximity to the stacks.

Again, we need a new fire proof book vault to insure our valuable collection against loss by fire. Our books are worth upwards of $150,000 and to allow them to be exposed is not wise. Every year we are adding a number of valuable sets. These are becoming scarcer every year. Many sets of periodicals which are much needed for our work are already out of print.

Respectfully submitted,

HENRY O. SEVERANCE, Librarian.

EXTENSION OF LIBRARY PRIVILEGES.

The Executive Board at its meeting on February 27, 1908, passed the following resolution:

"That the privilege of borrowing books from the library of the University be extended in the discretion of the librarian, to other institutions of the state, to clubs and organizations, to graduates and to former students of the University, and to other responsible private citizens of the state, under the regulations now in force governing the use of the library by students, provided that the borrower pay the cost of transportation."

Any citizen of Missouri wishing to avail himself of this privilege should address the Librarian, University of Missouri, Columbia, Missouri.

APPENDIX.

LIST OF SCIENTIFIC SERIALS IN THE LIBRARIES OF THE UNIVERSITY OF MISSOURI.

INCLUDING

GENERAL SCIENCE, MATHEMATICS, ASTRONOMY, PHYSICS, CHEMISTRY, GEOLOGY, BIOLOGY, BOTANY, ZOOLOGY, AND MEDICINE.

The letters following the title indicates the library where the set is shelved, as:

Ag. Agricultural library.
C. Chemical library.
D. Dairy.
Exp. Sta. Experiment Station library.
G. Geological library.
H. Horticultural library.
M. Medical library.
Obs. Astronomical observatory.
V. Veterinary library.
Z. Zoological library.

A plus sign (+) indicates that the serial is currently received and that the set is complete from the last volume number given.

Parallels (||) indicate that publication ceased with the preceding date or volume.

The sets are in the General library unless otherwise indicated.

Abaddia. Observatoire. Observations an cercle méridien, 1+ Obs.
Academia nacional de ciencias de la Republica Argentina. Cordoba. Boletin, 17^{3}, 18^{1}, 1903, 1905
Academia polytechnica do Porto. Annaes scientificas, v. 1^{1-4}, 2^{1-3}, 1905+
Academia de ciencias medicas fisicas y naturalis, Havana. Annales, v. 37, Apr.-May, 38+
Académie de Stanislas. Mémoires, 1854, 1862, 1865
Académie impériale des sciences de St. Petersburg, Bulletin, Sér. 5, 14+
Académie impériale des sciences de St. Petersburg, Travaux du musée géologique Pierre le grand prés 1+ 1907+
Académie royale de sciences, des lettres et des beaux-arts de Belgique. Bulletin, sér. 2, 38-41, 72-73
—— Annuaire, 1906+
Academy of natural sciences of Philadelphia. Proceedings, 54-56
Academy of sciences, St. Louis. Transactions, 1-16 1876+
Accademia dei Lincei, see Reale accademia dei Lincei.
Acta Mathematica, 1+ 1882+
Ala. Geological survey. Bulletin, 4-9
—— Report, 1874-76, 1890, 1900-1901
Alabama industrial & scientific society. Proceedings, 2, 4^{2}, 1892, 1894
Algiers. Observatoire. Catalogue photographique. Introduction and 5^{1}, 6^{1}, 7^{1}. Obs.
Allegheny observatory. Miscellaneous sci. papers, n. s. 1+ Obs.
Amer. acad. of arts & science. Proceedings, 37+ 1901+
—— Memoirs, 2 pt. 1, 1893, 12^{4}+ 1898+
American academy of medicine. Bulletin, 2-3 1895-9 M
Amer. assc. for the advancement of science. Proceedings, 1, 13, 18-20, 22+ 1848+
American chemical journal, 1+ 1879+ C
Amer. entomological society. (Contin. of entomological society of Phila.) Transactions, 4+ Sup. 1v. 1872+ H
Amer. ephemeries and nautical almanac, see U. S. nautical almanac office.
Amer. geologist, 1-36, 1888-1904
(Contin. in Economic geology.) G

American gynecology, 1-3. 1902-3 M
Amer. homoeopathic ophthalmological, otological & laryngological society. Transactions, 13-14. 1900-01 M
Amer. journal of anatomy, 1+ 1901+ M
Amer. journal of mathematics, 7+ 1885+
The American journal of medical sciences,
1-9, 12-15, 17; new series, 15-16, 19-22, 30-44, 55-76, 94, 97, 98, 100-103, 105-107, 116, 121-130, 132. M.
American journal of microscopy, 1-6|| 1875-1881||.
American journal of nursing 3-4. 7+ 1902+ M
American journal of obstetrics, 9-36, 40-42, 44+ 1876+ M
American journal of physiology, 1-14, 16+ 1898+ M
American journal of science, 51+ 1846+
American lancet, N. S. 10-17, 1886-1893 M
American mathematical society. Bulletin, 1+ 1894+
(Contin. of N. Y. math. society.)
American mathematical society. Transactions, 1+ 1894+
American medical association. Journal, 5-16, 40+ 1885+ M
—— Transactions, 2, 6, 24-33 1849+ M
American medicine, 2-4 1901-2 M
Amer. medico-psychological association. Transactions, 7-8, 1900-01
American meteorological journal, 9. 1892-3 G
American microscopical society. Transactions,
1-17, 20, 1878-1895, 1898
(Cont. of Amer. Society of Microscopists.)
Amer. monthly microscopical journal, 1-15, 22-23, 1880-98, 1901-02
Amer. museum of natural history. Bulletin, 2-14 1887+
—— Report, 1881, 1886-89, 1895-1901
Amer. naturalist, 1-7, 16-17$^{1-10}$, 20^{5}, ^{10}, 26-40 1867+
American ophthalmological society. Transactions, 3-9 1880-1902 M
American otological society. Transactions, 1-7 1868-1901 M
American pharmaceutical association. Proceedings,
12, 26, 28, 37, 38, 1864+
Amer. philosophical society. Proceedings, 8-36, 39+ 1861+
Amer. physical society. Bulletin, 1-3^{1}
American public health association, 11. 1885
American quarterly microscopical journal, 1|| 1878-79||
American quarterly of Roentgenology, 1+ 1907+

American veterinary review, 2-15 1878-91 V
American year-book of medicine & surgery, 1900 M
Ames botanical lab. Contributions, 1-4, 6
Analyst, 26+ 1901+ C
Anatomische gesellschaft. Verhandlungen
1+ 1887+ (v. 1, 2, 4, 9-12 in Anat. anzeiger). M
Anatomische hefte, Abt. I, Beiträge u. referate zur anatomie,
27+ 1905+ M
—— II, Ergebnisse der anatomie und entwickelungs geschichte,
1+ 1892+ Z
Anatomischer anzeiger, 1+ 1886+ Ergz. 1-3, 5-9. M
Annalen der chemie, see, Liebig's Annalen der chemie und der pharmacie.
Annalen der physik (Wiedmann),
77-134, 173-75, 218-20, 226, 237+ 1824+
Annalen der physik. Beiblatter, 1+ 1877+
——— Ergzbd., 1-4, 6 1843-74
Annalen der physik und chemie, see, Annalen der physik.
Annales de chimie et de physique,
Sér. 2, 1-59, 61-75; Sér. 3, 1-69; Sér. 4, 1-3, 7-9; Sér. 5, 7-9; Sér. 7, 25-30; Sér. 8, 1+ 1816+
Annales de gynécologie et d'obstetrique, 57+ 1902+ M
Annales der pharmacie, see, Liebig's annalen der chemie und der pharmacie.
Annali di matematica, Sér. 3, 1-13, 1898-1907
Annals of bee culture, 1872
Annals of botany, 1+ 1887+ H
Annals of British geology, 4. 1893 G
Annals of gynecology, 1, 3-6, 1887-1892
Annals of mathematics, 1-10, Ser. 2, 1+ 1884-96. 1899+
Annals of otology, 15, 1906 M
Annals of science, 1-2 1852-54
Annals of surgery, 1+ 1885+ M
Anneé biologique, 1+ 1895+
Annuaire de chemie, 1849-1851
Annual of scientific discovery, 1-16, 1850-65
Annual of the universal medical sciences, 1888-94 M
Archiv der mathematik und physik, Ser. 2, 17; Ser. 3, 1+ 1899+

Archiv für anatomie und entwickelungsgeschichte, see, Archiv für anatomie und physiologie. Anatomische abtheilung.

Archiv für anatomie und physiologie, M

—— Anatomische abtheilung, 1877+ Supp. 1889-93, 1895

—— Physiologische abtheilung,
1877+ Supp. 1879-80, 1884-87, 1889-90, 1892-93, 1899-00, 1902.

Archiv für entwickelungsmechanik der organismen, 1+ 1894+ Z

Archiv für experimentelle pathologie und pharmakologie,
1+ 1873+ M

Archiv für gesammte physiologie, 1+ 1903+ M

Archiv für gynaekologie, 53+ 1870+ M

Archiv für kinderheilkunde, 36+ 1903+ M

Archiv für microscopische anatomie, 1+ 1865+ M

Archiv für ophthalmologie, 1+ 1854+ M

Archiv für pathologische anatomie und physiologie,
1-170, 175+ 1847+ M

Archiv für physiologie, see Archiv für anatomie und physiologie.

Archives de biologie, 15-17, 1897-1900

Archives de médicine expérimentale et d'anatomie pathologique,
10, 1898 M

Archives de physiologie normale et pathologique, 28, 1896 M

Archives de zoologie expérimentale et générale, 38+ Z

Archives internationales de pharmacodynamie et de therapie,
1+ 1894+ M

Archives internationales de physiologie, 1+ M

Archives Italiennes die biologie, 1+ 1882+ M

Archives of neurology, 1-2. 1901-2 M

Archives of ophthalmology, 1+ 1869+ M

Archives of otology, 8+ 1879+ M

Archives of pediatrics, 1-9, 13, 1884-96

Archives vétérinaires, 1-9||, 1876-84|| V

Archivio di fisiologia, 1+ 1904+ M

Arkansas. Geological survey. Report,
1888^{1-4}, 1889^{2}, 1890^{1-3}, $1890^{4\,1-2}$, 1891^{1-2}, 1892^{1-2}, $1892^{5\,1-3}$

Arkiv för botanik, 7+ 1908+

Arkiv för matematik astonomi och fysik 1+ 1903+ Obs.

Arkiv för zoologie, 4+ 1908+

Association of American medical colleges. Transactions, 1900 M
Association of American physicians. Transactions, 18+ 1903+ M
Astronomical journal, 1+ 1849+ Obs.
Astronomical society of the Pacific. Publications,
11^{71}, 12^{72}, $17^{103, 105}$, 18+ Obs.
Astronomie, 8, 10, 11, 1889-92. Obs.
Astronomische abhandlungen, 1+
Astronomische gesellschaft. Katalog. Erste abteilung,
1, 3-15 Obs.
—— Zweite abteilung, 1, 2
—— Publikationen, 1+ Obs.
—— Vierteljahrsschrift, 1-32, 1866-97 Obs.
Astron. Nachrichten, 100+ 1881+ Obs.
Astronomy and astro-physics,
11-13‖, 1891-94‖. (Cont. as Astrophysical journal.) Obs.
Astrophysical journal,
1+ 1895+ (Cont. of Astronomy and astrophysics.) Obs.
Athens. Observatoire national. Annales, 1+ 1895+
Australasian association for the advancement of science. Report,
1-5, 7-8, 10. 1889-1905
Bacteriological world, 1‖ 1891‖ M
Baltimore. Health department. Report, 1882, 1887-88
Bee-keepers review, 9-14, 17-19+ 1896+ H
Beiträge zur chemischen physiologie und pathologie, 1+ 1901+ M
Beiträge zur geburtshilfe und gynaekologie, 1+ 1898+ M
Beiträge zur pathologischen anatomie, 1+ 1886+ M
Bericht über die fortschritte der anatomie und physiologie,
1-15‖, 1856-71‖ (Contin. as Jahresberichte über die fortschritte der anatomie und physiologie.) M.
Berichte über d. verhandlungen...Leipzig, see Koeniglich saechsische gesellschaft der wissenschaften.
Berlin. Königliche sternwarte. Beobachtungen ergebnisse,
1-11 Obs.
Berliner astronomisches jahrbuch, 1888, 1890-99, 1901+
Berliner klinische wochenschrift, 1+ 1864+ M
Berliner thierärztliche wochenschrift, 1-3, 5-18. 1885+ M
Besançon. Université. Observatoire astronomique. Bulletin astronomique, 1+ 1886+ Obs.

—— Chronometrique, 3-5, 7-13, 15+ 1891+
—— Météorologique, 1-14, 16+ 1890+
Bibliographia Linnaeana rec. Hulth, 1+ 1907+
Bibliographia medica, 1-3|| 1900-2|| M
Bio-chemical journal, 1+ 1906+
Bio-chemische zeitschrift, 1+ 1906+ M
Bio-chemisches centralblatt, 1+ 1903+
Bio-physikalisches centralblatt, 1+ M
Biological bulletin of the marine biological laboratory, 1+ 1899+ Z
Biological society of Washington. Proceedings, 16, p. 117-18; 17, p. 115-20; 19, p. 1-2
Biometrika, 1+ 1901+ Z
Bonn, Sternwarte. Astronomische beobachtungen, 3-5, 8. 1861 Obs.
—— Veröffentlichungen, 1+ 1895+ Obs.
Boston. Health board. Report, 3, 11
Boston medical and surgical journal, 14-15, 18-19, 21-24, 27, 43, 45, 50, 56-57, 75+ 1836-67 M
Boston society of natural history. Guides for sci. teaching, 1-6, 8, 12 1888-1893
—— Memoirs, 4^{2}, 5^{11}
—— Occasional papers, 7+ 1904+
—— Proceedings, 30-32. 1902-6
Bordeaux. Observatoire astronomique. Annales, 1+ 1885+ Obs.
—— Catalogue photographique, 1, 2^{1-2}, Obs.
Botanical gazette, 1-21, 25+ 1875+ H
Botanische zeitung, 58+ 1900+ H
Botanischer jahresbericht, see Just's botanischer jahresbericht.
Botanisches centralblatt, 1+ 1880+ H
Braithwaite's retrospect, part 28-31, 44, 45, 47, 48, 54, 57-65, 70-85, 90, 91, 1854-1885 M
Breslau. Königliche Universitäts sternwarte. Mittheilungen, 1-2. Obs.
Brighton health congress. Transactions, 1881
British association for the advancement of science, 1+ 1831+
British astronomical association. Memoirs, 1-7, 1893-9 Obs.
British medical journal, 1888-89, 1891-94, 1905-06+ M
Bronn's klassen und ordnungen des thierreichs, 1^{1-3}, $2^{1,3}$, 3^{1}, $4^{1a,1b}$, 5^{1}, 6+ 1880+ Z

Brooklyn entomological society. Bulletin, 1-7, 1878-1885 H
—— Entomologica Americana, 1-6|| 1885-90|| H
Brooklyn Inst. of arts & sciences, Cold Spring Harbor monographs, 1+ 1903+
Brooklyn Inst. of arts and sciences. Museum. Memoirs of natural science, 1^{1}, 1904
Brooklyn Inst. of arts and science. Museum. Science bulletin, 1+ 1901+
Brussels. Observatoire royale. Annales astronomiques, 1-7, 9+ 1878-96. Obs.
—— Annuaire astronomique, 1905+ Obs.
Bryn Mawr college monographs, 1+ 1901+
Buffalo society of natural sciences. Bulletin, 2+ 1874+
Bulletin astronomique, 8+ 1891+
Bulletin des sciences mathematiques, 1+ 1871+
Cairo. Abassia observatory. Report on meteorological observations, 1898+ Obs.
—— Rains of the Nile basin, 1904+
Cairo. Observatoire Khédivial. Résumé mensuel des observations météorologique, 1884-98. Obs.
California academy of sciences. Bulletin, 2 1888
—— Proceedings,
7^{1}, 1876; ser. 2, 2, 4, 5^{2}, 1889, 1893-94, 1896; ser. 3, Zoology, 1^{3}, 1897.
California. University. Department of geology. Bulletin, 1+ 1893+ G
—— Publications, entomology, 1^{2}
Cambridge (Eng.) observatory. Astronomical observations, 1-23, 1829-1898. Obs.
—— Report, 1904+
Cambridge philos. society. Proceedings, 1+ 1843+
Canada. Department of Interior. Report of Chief Astronomer, 1905+ Obs.
Canada. Geological survey. Contributions to Canadian palaeontology, 1^{1}, 3^{-5}, 2^{1-2}, 3^{1-3}, 4^{1-2}
Canada. Geological survey. Report, 1+ 1885+ G
Canadian entomologist (Entomological society of Ontario), 1+ 1869+ H

Cape of Good Hope Royal observatory. Annals, 1^{1-5}, 2^{1}, 3-7, 8^{2}, 1896+
—— Results of the astronomical observations, 1857, 1875-76. Obs.
—— Results of meridian observations, 1861-70, 1879-85, 1892, 95. Obs.
Carleton college. Goodsell observatory. Publications, 1^{1-6}, 2, 1890+ Obs.
Carnegie institute, Pittsburg. Museum. Annals, 1+ 1901+
—— Memoirs, 1+ 1903+
—— Report of director, 1905
—— Celebration of founder's day, 1907
Carnegie institute, Washington. Publications, 1+
—— Solar observatory, Mt. Wilson. Contributions, 1+ 1905+ Obs.
Carnegie institute, Washington. Yearbook, 1+ 1902+
Cellule (La.), 1+ 1884+ Z
Centralblatt für allgemeine pathologie und pathologische anatomie, 11+ 1900+ M
Centralblatt für bakteriologie, Abt. I, 1+ 1887+
—— Abt. II, 1+ 1887+ H
Centralblatt für die medicinischen wissenschaften, 41+ 1903+ M
Centralblatt für innere medizin, 24+ 1903+ M
Centralblatt für mineralogie, geologie & palaeontologie (suppl. to Neues jahrbuch für mineralogie), 1901+ G
Centralblatt für physiologie, 15+ 1901+ M
Charkow. Universität sternwärte. Annalen, 1
—— Publikationen, 4-5 Obs.
Chemical news & journal of physical science, $1\text{-}6^{43,\ 59,\ 60}$, 1860+ C
Chemical society of London. Journal, 1-14, 27-90, 1847+ C
Chemical society of London. Memoirs & proceedings, 1-3|| 1841-48|| C
Chemiker zeitung, 26+ 1902+
Chevreuse-Observatoire de météorologie, 5. Obs.
Chicago academy of sciences. Bulletin, 1, 2^{2-4}, 1883
—— Geological and natural history survey. Bulletin, 1+ 1896+
—— Special publications, 1, 1902
Chicago. Health department, 1881-82, 1887, 1891
Chicago pathological society. Transactions, 4, 1899-1901. M

Chicago. University. Yerkes observatory. Publication, 1+ 1900+ Obs.
—— Report, 1899-1900
Christiana. Universitäts stern warte. Zonenbeobachtungen, 1 & supp. Obs.
Cincinnati (O.). Health department. Annual report, 14-15, 20-21, 1880-7
Cincinnati. University. Bulletin of mathematics, 1, 1904
Cincinnati. University. Observatory. Publications, 11, 14. Obs.
College of physicians, Philadelphia. Transactions, 2, 4-6, 7-11. M
Colorado college publications. Science series, 12+ 1907+
Colorado. Board of health. Report, 4-5, 6, 8. 1892-1906
Colorado scientific society. Proceedings, 7+ 1904+
Colorado. University. Medical bulletin, 2^{1}, 3^{3}+
Comptes rendus des travaux de chemie par Laurent et Gerhardt, 6. 1851. C
Columbia university. Astronomical observatory. Contributions, 1+ 1892+ Obs.
Columbia university. Biological series, 1-8, 10, 1894+
Columbia university. Contributions from the geolog. dep't, 10^{90}, $11^{91,\ 100}$, $13^{111,\ 120}$
Congrès géologique international. Compte rendu, 1891
Congrès international de physique. Rapport, 1900
Congreso cientifico Latino Americano. Reunion, 2. 1901
Congress of American physicians. Transactions, 6. 1903
Congress of arts and science, 1-8||
Connecticut. Board of health. Annual report, 2+ 1879+
—— Geological survey. Bulletin, 1+ 1904+
Connecticut academy of arts & sciences. Transactions, 9, 11. 1895-96
Connecticut Audubon society. Report, 2
Davenport academy of natural sciences. Proceedings, 4+ 1882+
Denison University. Bulletin of the scientific labs., 2^{1-2}, 3, 4^{1-2}, 5, 6^{2}, 7, 8^{1-2}, 9^{1-2}, 10, 11, 12^{1-11}, 13^{3}, 1886+
Detroit (Mich.). Board of health. Annual report, 1. 1882
Detroit medical journal, 7+ 1907+ M
Detroit observatory. Transactions, pt. 1, 1904. Obs.
Deutsche botanische gesellschaft. Berichte, 1-18, 20+ 1883+ H

Deutsche entomologische zeitschrift. 1906+ H
Deutsche mathematiker vereinigung. Jahresbericht,
1-9, 11+ 1890+
Deutsche mechaniker-zeitung, see, Zeitschrift für instrumentenkunde, Beiblatt.
Deutsche medicinische wochenschrift, 3+ 1877. M
Deutsche pathologische gesellschaft. Verhandlungen, 6+ 1903+ M
Deutsche zeitschrift für thier-medicin und vergleichende pathologie,
1-22||. 1875-97||. (Contin. as Zeitschrift für Thièrmedicin.) V.
Deutsches archiv für klinisches medicin 1+ 1866+ M
District of Columbia. Health officer. Report, 1879, 1881
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Rhodora, 7^{73-74}, 8^{85}
Rochester academy of science. Proceedings, 1+ 1891+
Rome. Reale osservatorio del collegio Romano. Memorie, Ser. III, 1-4^{1-2}. Obs.
—— Vatican observatory. Catalogo photografico stellare, 1. Obs.
Royal astronomical society. Memoirs, 1-57,1822-1903
—— Monthly notices, 19-27, 51+ 1858+ Obs.

Royal geological society of Cornwall. Transactions,
1-2, 4-5, 1814-43
Royal Irish academy, Dublin. Transactions, 2, 26^{10}
Royal microscopical society. Journal, 1+ 1878+ Z
Royal society of Canada. Proceedings & transactions,
Ser. 1, 9-12; ser. 2, 1+ 1892+
Royal society of London. Philosophical transactions,
150-177, A, 178-192, 194+ B, 194+ 1860+
——Proceedings, 7+ 1854+
Royal society of Victoria. Proceedings, n. s., 16+ 1903+
St. Louis (Mo.) Health department. Annual report,
1884, 1888, 1893-95
St. Louis medical review, 50, 55+ 1904+ M
San Francisco. Board of health. Annual report, 1898
Sanitarian, 28-33, 46-52. 1892-1904
Schweizerische-naturforschende gesellschaft in Winterthur. Verhandlungen, 83-87, 1900-1903
Science, 1-14, 19-22, 1883-1893; n. s. 1, 3+ 1895+
Science abstracts, 1+ 1903+
Science gossip, n. s., 2-8, 1896-1901
Science progress, London, 1+ 1906+
Scientiae baccalaureus, 1|| 1890||
Scientific American, 66+ 1892+
—— Supplement, 33+ 1892+
Sidereal messenger,
1-10|| 1883-92|| (Cont. as Astronomy and astrophysics.) Obs.
Skandinavisches archiv für physiologie, 1+ 1889+ M
Smithsonian institution. Astrophysical observatory. Annals,
1+ 1900+ Obs.
—— Contributions to knowledge,
1+ 1847+ (v. 3 l. 22, 37; 5 l. 45; 21 l. 387-8; 26 l. 647).
—— Report, 1, 5-6, 8+ 1847+
Smithsonian miscellaneous collections,
1+ 1862+ (v. 1 l. 31, 153; 2 l. 163, 176; 6 l. 171; 7 l. 183; 8 l. 137, 168, 178; 10 l. 231; 11 l. 265; 12 l. 263; 34 l. aeè).
Sociedad scientifica. Antonio Alzate, Mexico. Memorias y revista,
13^{7-10}, 18^{6-8}, 19^{5-12}, 20^{5-12}, 21-24, 25^{1-2}, 26^{1-3}

Societas pro fauna & fora fennica acta, 27^5
Societas scientiarum naturalen croatica, 16-19
Societas scientiarum Fennica, see, Finska vetenskaps societeten.
Société astronomique de France. Bulletin, 10+ 1896+ Obs.
Société entomologique de France. Annales, 1906+ H
Société d'histoire naturelle, Toulouse. Bulletin, 7-10. 1872-76
Société helvétique des sciences naturelles in Winterthur, see, Schweizerische naturforschende gesellschaft.
Société helvétique des sciences naturelles. Geneva. Comptes rendu des travaux, 82, 84-86, 1900-1903
Société impériale des naturalistes, Moscow. Bulletin, 61-62; n. s. 1-17, 1885+
——Nouveau mémoires, 16, 1898-1902
Société royale malacologique de Belgique. Procès-verbeaux des séances, 12
Society of Chemical industry. Journal, 1-22, 24-25, 1882+ C
South Carolina. Board of health. Annual report, 15, 18-25, 1894-1900
South Dakota School of mines. Bulletin, 3-4, 6
Stern ephemeriden zur bestimmung von zeit und asimuth, Döllin, 1899-91. Obs.
Stockholm. Observatoriet. Astronomiska iakttagelser, 1+ 1876+ Obs.
Stonyhurst College obs. Results of meteorological & magnetical observations, 1902+ Obs.
Strassburg K. Universitäts, sternwarte. Annalen, 1-2, 1896-99. Obs.
Tachkent. Observatoire astronomique et physique. Publications, 1-5; 1899-1901. Obs.
Tacubaya (Mexico). Observatorio astronomico nacional. Anuario, 1+ 1881
—— Bolétin, 1^{1-7}, 1890
Tebbutt's observatory (New S. Wales). Report, 1890-98, 1900-1903. Obs.
Tennessee. Geological survey. Report, 1, 1855
Tennessee. Board of health. Report, 1880-84
Texas. University. Bulletin, Science series, 5-11
Texas academy of sciences. Transactions, 1^5, 2-7, 1892-1905
Texas state medical association. Transactions, 17, 32-35. M

Therapeutic gazette, n. s., 5, 1884; 3d ser., 1-9, 1885-1893
Tijdschrift over plantenziekten, Ghent, 10-11
Tokio. Observatoire. Annales, 1^{1-3}, 2^{1}, 3^{2-4}. Obs.
Toronto. University. Studies. Anatomical ser., 1+ 1900+
—— Biological ser., 1-5, 7, 1898+
—— Chemical lab. papers, 40-54, 56-60, 62-65
—— Geological ser., 1-4, 1898+
—— Physical sci. ser., 1, 3-4, 1903+
—— Physiol. ser., 1+ 1900+
Torrey botanical club. Bulletin,
1-6, 10-17, 19-29, 31-32+ 1870+ H
—— Memoirs, 7, 1899
Torreya, 1^{2}, 1901
Toulouse. Observatoire astronomique. Annales,
1-5, 7, 1880+ Obs.
—— Catalogue photographique, 2^{1}, 4^{1}, 6^{1}, $7^{1,3}$
U. S. Agr. dept. Biological survey. Bulletin, 1-4, 11-20, 1889+ Ag.
—— Biological survey. North Amer. fauna,
1-8, 11-24. 1896. Exp. Sta.
—— Entomology division. Bulletin, o. s., 1-32; n. s., 1-54, 1884-01 H
—— Entomological com'n. Report, 1-5‖ 1878-87‖ H
U. S. Agr. dept. Weather bureau. Bulletin,
1-12, 14-19, 21-29, 33, 35, 36
—— Bulletin, A, C, E-H, L, Q, 1897-1906
—— Monthly weather review, 31+
—— Publications, 3-29, 33, 36
—— Report, 1891-94, 1896-1905
U. S. Board of health. Report, 1882-83
United States. Bureau of standards. Bulletin, 1+ 1904+
U. S. Coast & Geodetic survey. Atlantic coast pilot, 4-8. 1899-1902
—— Bulletin, 1-40. 1888+
—— Pacific coast pilot, 1879
—— Special publications, 1-7, 1898-1901
—— Tide tables, 1900-02
U. S. Fish & Fisheries, Com'n. Bulletin, 1-22, 1881-1902. Z & G.
U. S. Fisheries bureau. Report, 1-28, 1871-1902. Z & G
U. S. Geological survey. Bulletin, 1-46, 48-147, 149-260, 262+ G
—— Mineral resources of the U. S., 1882-93, 1900, 1904-05

U. S. Geological survey. Monographs, 1+ 1882+ G
—— Atlas, 2a, 3a, 12a, 20a, 45a
—— Professional papers, 1+ 1892+ G
—— Report, 1+ G
—— Water supply & irrigation papers, 1-79, 81+
—— Hygienic laboratory. Bulletins, 1+ 1900+
—— Life saving service. Annual report, 1876, 1878, 1880+
—— Light-house Board. Report, 1873-80, 1882-91, 1898-1904
U. S. Medical and surgical journal, 1-3, 1866-7 M
U. S. National herbarium. Contributions, 1^{7-8}, 2-8, 10^{1-3}, 11^{1-4}
U. S. National museum. Bulletin, 1+ 1875+
—— Proceedings, 1+ 1878+
—— Report, 1884+
—— Special bulletin, 2, 4^{1-2}, 1895-1905
U. S. Nautical Almanac office. Amer. Ephemeris & Nautical almanac, 1866-71, 1873-87, 1880+
—— Astronomical papers of the American Ephemeris, 1-8. 1895+ Obs.
—— Pacific coaster nautical almanac, 1898, 1900, 1902
U. S. Naval observatory. Astronomical & meteorological observations, 3, 5, 6, 8, 10-38, 1847-92. n. s. 1+
—— Report, 1891-94, 1897+
—— Report of board of visitors, 1899
U. S. Public health and marine hospital service. Annual report, 1875-77, 1884, 1888-89, 1892+
U. S. Public health and marine service. Public health reports, 12, 14+ 1898+
—— Transactions annual conference of state & territorial health officers, 1-4. 1903-6
U. S. Signal service. Professional papers, 4, 7-8, 11-13, 15-16, 1879-84
—— Report, 1872, 1875-89, 1891
Vassar College observatory. Publications, 1, Obs.
Vermont. Board of health. Report, 15. 1905-6
Veterinarian, 1-72. 1828-1899
Vienna K. K. Universitäts-sternwarte. Annalen, 15, 18. Obs.
Virginia. Geological survey. Bulletin, 1+ 1905+

Virginia. University. Leander McCormick observatory, 1-2[1]. Obs.
Warsaw. Observatoire. Observations, 1-3, 1892-1902. Obs.
Washington. Geological survey. Annual report, 1+ 1901+
Washington academy of sciences. Proceedings, 1+ 1899+
Washington university. Medical department. Quarterly bulletin, 2+ 1903+
Washburn observatory. Publications, 1-11. 1882-1902. Obs.
Wellcome chemical research labs. London, 1, 4-56, 62-69
Wellcome research laboratories. Khartoum. Reports, 1+ 1904+
West Hendon House observatory, Sunderland, Eng. Publications, 1-3. 1891-1905. Obs.
Wilson bulletin (Wilson Ornithological club), 8-11, 13-16, 20-29, 54-60
Wisconsin. Board of health. Report, 1-20
Wisconsin. Dairy & food commissioner. Report, 1891-1900
Wisconsin. Geological survey. Final report, 1-3, 1873-79
Wisconsin. Geological & natural history survey. Bulletin, 1+ 1898+
Wisconsin. University. Bulletin, science series, 1+ 1894+
Wisconsin academy of sciences, arts, & letters. Transactions, 1+ 1870+
Wyoming University. School of mines. Bulletin: Petroleum ser., 1
Yale university. Observatory. Report, 1880-81, 1893-98. Obs.
—— Transactions, 1+ 1887+
Year book of facts, 1853
Year book of the scientific and learned societies of Great Britain and Ireland, 24+ 1907+
Yerkes observatory, see Chicago University.
Zeitschrift für allgemeine physiologie, 1+ 1902+ M
Zeitschrift für analytische chemie, 1+ 1862+
Zeitschrift für anatomie und entwickelungsgeschichte, 1-2|| 1875-77|| M
Zeitschrift für angewandte chemie, 1+ 1888+
Zeitschrift für angewandte mikroscopie, 1-9, 1895-1904. Z
Zeitschrift für biologie, 1+ 1865+
Zeitschrift für elektrochemie, 8+ 1902+ C
Zeitschrift für fleisch-und milchhygiene, 10+ 1899+

Zeitschrift für geburtshülfe und gynäkologie, .1+ 1877+ M
Zeitschrift für hygiene und infectionskrankheiten, 1+ 1886+ M
Zeitschrift für instrumentenkunde, 22+ 1902+
—— Beiblatt, 22+ 1902+
Zeitschrift für klinische medicin, 1+ 1880+ M
Zeitschrift für krystallographie, 1-20, 1879-92
—— Register, 1-20
Zeitschrift für pflanzenkrankheiten, 10+ 1900+ H
Zeitschrift für physikalische chemie, 1-45, 1887+ C
Zeitschrift für physiologische chemie, 1+ 1877+ M
Zeitschrift für schulgesundheitspflege, 17+ 1904+
Zeitschrift für thiermedicin,
1+ 1897+ (Contin. of Deutsche Zeitschrift für Thiermedicin.)
Zeitschrift für untersuchung der nahrungs & genussmittel,
1+ 1898+ C
Zeitschrift für wissenschaftliche microscopie, 1-3, 16-23+ 1884+
Zeitschrift für wissenschaftliche zoologie, 67+ 1900+ Z
Zoological record, 1+ 1864+ Z
Zoologische jahrbucher: Abt. für anatomie & ontogonie,
13+ 1899+ Z
—— Supplement, 4+ 1898+ Z
Zoologische station zu Neapel. Mittheilungen, 14+ 1901+ Z
Zoologischer anzeiger, 19+ 1896+ Z
Zoologischer jahresbericht, 1897+ Z
Zoologisches institut. Graz. Arbeiten, 6^{8}, 7^{1-4}, 8^{1-2}
Zurich, Sternwarte des eidgenossischenpolytechnikums astronomische. Mittheilungen, 41-80, 81-95, 97, 98. Obs.
—— Publikationen, 1-3. Obs.

UNIVERSITY OF MISSOURI

HANDBOOK OF THE LIBRARIES

COLUMBIA
UNIVERSITY COÖPERATIVE
STORE
1910

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STAFF.

Henry O. Severance, Librarian.
Walter K. Stone, First assistant librarian.
(Leave of absence, 1910-11.)
Florence Whittier, Assistant librarian.
Grace Lefler, in charge of catalog.
Grace D. Phillips, in charge of periodicals.
Bertha J. Bond, in charge of Law library.
Clarence W. Sumner, in charge of night service.
S. Blanche Hedrick, in charge of Agricultural libra
Bessie E. Tiffy, charging clerk.
Maude Higginbottom, stenographer and typist.

LIBRARY HOURS.

General Library—
Open 7:55-6:00; 6:45-10:00.
Sundays, 2:00-5:00.
Christmas holidays, 7:55-6:00.
Summer session, 7:55-5:30; 7:00-10:00.
Summer vacation, 8:00-12:00; 1:30-5:30.
Agricultural Library—
Open, 8:00-12:30; 2:00-5:00.
Engineering Library—
Open, 9:00-12:00; 2:00-4:30; 7:00-10:00.
Law Library—
Open, 8:00-12:30; 2:00-5:00; 7:00-9:00.
Medical Library—
Open, 9:00-1:00; 2:00-5:30.

CONTENTS

	Page.
Staff	1
Library hours	1
Directory of the libraries	5
History	6
Exchanges	7
Borrowing books	8
Inter-library loans	8
Accession book	9
Classification	9
Shelf-list	11
Catalog of the libraries of the University	12
Library of Congress catalog	13
Stack rooms	14
Reading rooms	14
How to draw a book	16
Faculty and Alumni collection	18
Red star collection	18
Text-book collection	18
Theses	18
Government documents	19
Reference collection	20
Bibliographies	20
Dictionaries	21
Atlases and maps	21
Encyclopedias	22
Current periodicals	22
Indexes to periodicals	23
Bound periodicals in reading room	24
Rule for circulation of periodicals	24
Newspapers	25
Indexes to newspapers	26
New books	26

Aids in selection and purchase of books 27
Trade bibliographies 28
Catalogs of second-hand books 30
Aids to general reading 30
Aids for orators and debaters 31
Seminary room 32
Law library 33
Agricultural library 33
Course in use of reference books 34
Course in library methods 35
Regulations governing use of library 35

HANDBOOK OF THE LIBRARIES

DIRECTORY OF LIBRARIES.

The libraries containing Sept. 1, 1910, 100,850 volumes and 20,000 pamphlets, are located in Academic Hall and in the various buildings of the several schools.

The General library occupies the first floor of the west wing of Academic Hall. The Reading room is open from 7:55 a. m. to 6 p. m. and 6:45-10 p. m. during the college year.

The Agricultural library containing about 5,000 volumes occupies the second floor of the west end of the New Agricultural building. It is open from 8-12:30 and 2-5. Miss S. Blanche Hedrick is in charge.

The Engineering library containing 3,400 volumes is located on the second floor of the west side of the annex to the Engineering building. It is open 9-1; 2-5 and 7-10. A student is in charge.

The Law library containing 14,650 volumes occupies a large part of the first floor of the Law building. It is open from 8-12:30; 2-5 and 7-9. Miss Bertha J. Bond is in charge.

The Medical library containing 3,852 volumes is located on the second floor, south side of the Medical building. It is open from 9-1, 2-5. A printed cata-

BORROWING BOOKS.

a. Students and citizens.

Officers and students of the University may draw books from the Library without the formality of registration, but other citizens desiring to borrow books for home use for the first time, must sign a registration card at the Loan desk. The book desired should be looked up in the card catalog which is in the corridor of the Library. Then proceed in accordance with instructions given on page 16, How to draw a book. Citizens have the same privileges as students. The books on the Reference and Index shelves may be consulted without formality but they must not be taken from the room.

b. Non-residents.

Non-residents may also borrow books from the library under certain restrictions which may be known by addressing the Librarian. A catalog of the Medical library was issued in June and sent to all the physicians of the State which serves as a finding list. Many doctors are enjoying the privilege of borrowing books from the library.

c. Inter-library loans.

The library may borrow books from other libraries for the use of its readers. The library of the State Historical Society, Room 13, Academic Hall, the Public School library, in the High School building, and the Public Library of Columbia, located in the Court House, are at the service of the students.

ACCESSION BOOK.

The accession book may be consulted in the Seminary room for any information pertaining to the number of books in the Library, new books, or additions to any department. It is a record of all the books received by purchase, by gift or by exchange, entered and dated, in order of receipt, with full data as to price, source and the department ordering them.

CLASSIFICATION.

The books in the Library are arranged by the **Dewey decimal classification.** According to this scheme, the field of knowledge is divided into 9 main classes with one class marked 0 for works too general to belong to any special class, such as cyclopedias. Following is a list of the classes:—

000 General works, bibliography, cyclopedias, etc.
100 Philosophy, psychology, ethics.
200 Religion, Bible, Church history.
300 Sociology, economics, law, education.
400 Philology.
500 Natural science.
600 Useful arts and industries.
700 Fine arts.
800 Literature.
900 History, travel, biography.

Each class is divided into 10 divisions, and each division into 10 sub-divisions. Then a decimal point is used and the sub-dividing carried out till the

classification is as minute as desired. The numbers thus obtained are assigned to the books and the books are arranged in simple numerical order, the numbers being treated as decimals. Thus 512, Algebra, precedes 513, Geometry, and follows 511, Arithmetic. Taking 513.1 as an example, the analysis of a number is as follows:—

Class 5—natural science.
Division 1—mathematics.
Section 3—geometry.
Point 1—plane geometry.

Then all plane geometries are numbered 513.1 and thus kept together, and arranged alphabetically by authors.

Again all books on English history are kept in 942, analysis being:

Class 9—history.
Division 4—European history.
Section 2—history of Great Britain.

Then by using decimal points, the periods of history are grouped together.

A copy of the Decimal classification may be had at the loan desk.

The books are arranged in numerical order. When one of these numbers is assigned to a book it is called a class number. This is combined with another number known as the book number which distinguishes books by Nathaniel Hawthorne from books by Julian Hawthorne and insures their falling into alphabetical sequence with respect to books by Giddings, Larned, Manning, etc. The class number and

the book number together form the call number which will be found on the back of the book, and on the upper left hand corner of the catalog card. This call number should always be given with the name of the author and the title of the book when the reader makes out his ticket for a book.

SHELF-LIST.

The **classed catalog** or shelf-list is kept in the catalog room where it may be consulted. It is also a card catalog, but is arranged numerically according to the Decimal Classification and represents the order in which the books stand on the shelves. That is, all books of one class are here grouped together, so that while one would have to consult the name of each author or subject in the general catalog in order to find the material on the tariff, by consulting the shelf-list we find that all the books are listed under the general number for the tariff, as 337, arranged alphabetically by authors. The nearest approach to the shelf-list is the subject card in the general catalog. When one turns to the subject "tariff" in the catalog, one finds all the books on that subject listed alphabetically by authors. The shelf-list is especially useful for research work where one wishes to find everything the Library possesses upon a given subject. It is a more reliable source of information than the shelves themselves, as so many books are always in use.

CATALOGS.

Dictionary Catalog.

The catalog of the University Library is on cards and is kept in the case of drawers in the corridor of the Library. The catalog contains a card entry for the author, title and subject of every book in the Library, and the whole is arranged according to the dictionary plan in one alphabet. Thus one wishing Hastings' Dictionary of the Bible would look under "Hastings" till he found the title "Dictionary of the Bible." But if he knew the title of the book and did not know the author then he would look under the first word of the title, and there he would find a card giving the exact title with the author. Or, if the person wanted something on the Bible and didn't know what, then he would look under "Bible" where he would also find a card for this book.

The catalog further contains cross-references from all forms of headings not used to those that are used. Thus under "Twain, Mark" we find the reference "see Clemens, Samuel Langhorne" which means that the pseudonym "Mark Twain" is not used, but rather the author's real name, "Samuel Langhorne Clemens." So also, under "domestic science" we find the reference "see domestic economy." Likewise wherever there are several different headings under which similar material is entered, references are given to all the other headings: as "Banking, see also finance, money," etc.

Most of the books are kept in the stacks behind the loan desk and are to be obtained by presenting

a Reading room ticket properly made out to the clerk at the desk. All books not kept in the stacks, have the name of the library where they are kept stamped on the catalog card in red ink just below the number. Similarly all books belonging to the Reference collection and kept on the open shelves of the reading room, are stamped "Reference."

Many of the books are in departmental libraries. This fact is indicated on the cards by the name or the abbreviation of the name of the library just below the call number, such as

Agr. Lib., Agricultural library.
Med. Lib., Medical library.
Chem. Lab., Chemical laboratory, etc.

Titles so marked should be sought for in the special libraries.

Library of Congress Catalog.

There is another card catalog in the library—the catalog of the Library of Congress kept in the catalog room, but accessible to the public at all times. The cards are arranged alphabetically by authors. The Library of Congress, according to law, receives free two copies of every book copyrighted in this country, and is constantly adding foreign books to its collection by purchase, by gift and by exchange. It is now the largest library in America. It is printing cards for all new accessions and for the older books as they are re-cataloged. The University library gets the proof sheets of all these, cuts them into cards and files them in this catalog.

STACK ROOMS.

The books in the General library are shelved in the three rooms and corridors just east of the loan desk, on the wall cases in the Reading room, in north corridor in catalog room, in Room No. 6, in the Document room in the Duplicate room and in the basement reading room. In the main stacks back of the loan desk are shelved the books on religion, sociology, economics, political science, philology, art, architecture, music, literature and history, represented by the classes 200 to 400, 700 to 900. The textbook collection is also shelved here. The reference books and bound periodicals are in the Reading room. The books on science, 500-600 are shelved in the basement reading room; the bibliographical books in Room No. 6 and in the catalog room; the books on philosophy 100-199 in the north corridor, the government documents in the Document room and the duplicates and the University publications used for exchanges in the Duplicate room.

READING ROOMS.

There are two reading rooms, one on the first floor and one in the basement of the library. The basement room is intended for graduate and seminary students and others doing research work. The room on the first floor is for the undergraduates and the public. This room has been made attractive by the loan and gift of paintings.

The following were loaned by Professor J. S. Ankeney:

Landscapes: In France; Tower Bridge; On the Seine; A Brittany Farm; Last of the Snow; Spring

in Missouri; In the Luxembourg Gardens; Sunset in the River; Paris from the Terrace at Meudon; Pont Neuf; A March Sunset; Under the Trees; The Missouri at Rocheport.

Interiors: A Brittany Fire Place; In an Old Church, France.

Still Life: Shell, Plate and Oranges; Blue and Brass; Brass and Copper.

Decoration: Perugino's Crucifixion (copy).

Lippi's Madonna and Child and the Child and Bird are copies executed and owned by Miss Heinrici; Sylvester's Two Sisters is loaned by Professor Street; the Columns and the bust of Emerson, by D. C. French, were purchased by the library; the two engravings, Frederick Schiller and Mark Twain are gifts, the former presented by Der Deutsche Klub. So also are the portraits of Dr. Jesse, painted by Professor Ankeney, and Dr. Hill, painted by Miss Heinrici, presented by Alpha Phi Sigma. The portraits of Wm. F. Switzler and Governor Hadley decorate the corridor and those of B. B. Minor, president of the University 1860-62; Wm. H. Duncan, treasurer 1841-55; Joseph Ficklin, professor of Mathematics 1865-77; Joseph Norwood, librarian 1862-77 and dean of Medical faculty 1872-80, in the cataloging room.

The Loan desk is in the main reading room. Application should be made to the attendant at this desk for all books. Those books which are drawn for home use should be registered with the Charging clerk at the south end of the Loan desk. Books borrowed for home use must be returned to this desk in order to have the books discharged.

HOW TO DRAW A BOOK.

When a reader visits the library for the first time he should learn the location of the card catalog, the indexes to books, the indexes to periodicals, the Atlases, dictionaries, cyclopedias and the reference books. For the description and location of these he should consult the index of this handbook. Any books in these classes may be used freely without the formality of Reading room slips.

If the reader wishes the use of a book shelved in the stacks, he should fill in a Reading room slip for it. First consult the card catalog. The cards are arranged by authors, titles, and subjects in one alphabet like the subject matter of a dictionary or encyclopaedia. If he knows the author he should turn directly to it in the catalog; if he knows the title and not the author, he should turn directly to the first word of the title. If both the author and the title are unknown, he should turn to the subject where he will find a list of the books bearing on that subject. To illustrate: If a reader wishes to find a book on **taxation** which he knows was written by Seligman he should turn to Seligman where he will find a card for "On the Shifting and Incidence of Taxation." If he wishes to find a book on taxation but does not remember the author he should turn to the subject of **taxation** where he will find cards for the books treating this subject. The subject cards have red edges and the subjects are written in red at the top of the card.

The reader should notice that when the same name is given to a person, a place and a title, the cards are alphabetted in this order, person, place, title.

Example:

London, Jack.
    Call of the Wild.
London (City) Board of Education.
London and Edinburgh philosophical magazine.
New Bedford.
New York (City).
New York (State).
New York medical journal.
Newark.

The call number in the upper left-hand corner of the card called the class mark, together with the author and title should be written on one of the Reading room tickets kept for that purpose in the trays at each end of the catalog case. The ticket should then be handed to one of the attendants at the Loan desk. To insure quick service one should never fail to include the class mark on the Reading room ticket. Use a white ticket for books to be used in the Reading room. Use a pink ticket for books to be used at home. A student may draw three books at a time with a limit of 14 days on each book. A fine of 5 cents a day is incurred for overdue books. "Reference" and "reserved" books may be drawn for overnight use only. See page 37.

FACULTY AND ALUMNI COLLECTION.

This is a collection of books written by members of the Faculty and by Alumni. It is shelved in the carved mahogany case in the corridor of the library. The case came from the German exhibit at the St. Louis Exposition.

RED STAR COLLECTION.

This is a selection of popular books for cultural reading, including fiction, travel, description, biography, etc. The books are changed occasionally and new ones are being frequently added. These may be drawn with a limit of 14 days on each book. They are shelved in the Reading room on the wall case to the north of the Loan desk. It is called the "Red star" collection because of the red star label stamped on the back of the books.

TEXT-BOOK COLLECTION.

This collection, as the title indicates, consists of text-books in the several departments of knowledge. A great many of the books were donated by the publishers. It is now shelved in Room C of the stacks and contains about 400 volumes.

THESES.

The theses for the master's and doctor's degree have been bound and cataloged and may be borrowed like books. The Engineering theses are in the Engineering library.

GOVERNMENT DOCUMENTS.

The government documents are shelved in the "Document room" on the second floor. Readers wishing to consult the documents should apply to the book clerk.

The indexes to the government documents are shelved with the other indexes opposite the catalog in the corridor of the Library. They are:

Poore, B. P. Descriptive catalog of the government publications of the United States, Sept. 5, 1774-Mar. 4, 1881. General arrangement is chronological with author and subject index.

U. S. tables of and annotated index to the congressional series of the U. S. documents. 15th-52d. Congress, 1817-1893. The material is arranged alphabetically by author, subject and title.

Ames, J. G. Comprehensive index to government publications, 1881-93. Includes publications of departmental and congressional sets with author index.

U, S. Comprehensive index; catalog of the documents, 1889-date. Issued at the close of each regular Congress. Includes departmental and congressional sets. Arrangement, alphabetic by subject.

U. S. Monthly catalog of public documents, 1895-date. Priced list by bureau and division (formerly by department), a monthly index from 1900-05, a cumulative index every six months, with an annual index in December. The special value of the catalog is to show how and where the documents may be obtained, and the prices of those available for distribution.

REFERENCE COLLECTION.

The reference collection of books containing about 5,000 volumes, is arranged on open shelves around the reading-room so that readers may have free access to the books. These are all arranged numerically according to the classification number on the catalog cards. This reference collection contains the principal bibliographies and catalogs, encyclopedias—American, English, French and German—dictionaries—English and foreign—atlases, bound volumes of the popular periodicals and the most frequently used works upon all subjects. On the north end of the delivery desk will be found a special card catalog of all books on the reference and index shelves. Reference books should be returned to their places on the shelves promptly after using.

BIBLIOGRAPHIES.

The reference collection begins with the bibliographies, indexes and catalogs which are shelved in the corridor of the Library opposite the catalog-case.

The case in the corridor contains a collection of books which supplements the card catalog called "Indexes." It contains indexes of the government documents, the International catalog of scientific literature, dictionaries of quotations, contemporary biography, statesman's year-book, almanacs, etc.

DICTIONARIES.

The dictionaries are shelved on the dictionary case in the center of the Reading room. The more important ones are the following:

Century, Webster's International, Standard, Murray's English, Skeat's Entymological, Bosworth's Anglo-Saxon, Larouse (French), Lippincott's Gazetter, Thomas's Biographical dictionary, and the smaller dictionaries of most of the languages.

If the reader wishes the pronunciation and brief definition of a word he should consult Webster's International or the Standard. If he is looking for definition of scientific terms and encyclopaedic information he should consult the Century, both the old and the new volumes. If he wishes the history of a word with examples of its usage in ancient and modern times, he should consult Murray's dictionary, sometimes called the Oxford dictionary.

Dictionaries of biography are shelved with the reference books—920—but the current biographical dictionaries like the Who's Who, are on the Index case. Dictionaries of special subjects are shelved with their respective subjects in the reference collection, such as Hasting's Dictionary of the Bible which is classed with religion.

ATLASES AND MAPS.

The atlases are on the atlas case at the west end of the dictionary case. The more important ones are the Century, Rand MacNally's and Cram's. The topographic and geologic maps comprising a large

and valuable collection are shelved in the Geological building. Political and other maps of which the library has but few are shelved in the basement stack room.

ENCYCLOPAEDIAS.

The general encyclopaedias are kept on the wall case in the Reading room opposite the Loan desk. The special encyclopaedias are shelved with their subjects in the Reference collection. Lalor's Cyclopaedia of political economy is shelved with the books on economics in 330. Of the general cyclopaedias the library has: The American, the Americana, the Britannica, the New International, the Johnson's, and Brockhaus Conversations-lexikon.

Every encyclopaedia has its strong points. Some are old and some recent. The reader must determine therefore, beforehand the exact information he wishes to secure and which encyclopaedia will give him the information with the least effort and briefest time. The Americana is the latest encyclopaedia and is especially full on scientific topics. The New International is the busy man's book of facts. The annuals bring the matter down to the close of 1909. The Britannica is old but it contains exhaustive treatises on a limited number of subjects out of date for modern history and all science. Use the index volume. Subjects are not arranged alphabetically.

CURRENT PERIODICALS.

The library receives currently 1300 periodicals. The agricultural, engineering, legal, and medical periodi-

cals are sent to the respective departmental libraries. The others are kept in the pigeon holes built against the wall spaces in the south end of the Reading room. This gives a collection of 640 periodicals accessible to every reader. They are thrown into classes and arranged alphabetically under each class, with the subjects printed in large letters at the top of the rows of pigeon holes. A printed list of current periodicals received by all the libraries may be had by enquiry at the Loan desk.

INDEXES TO PERIODICALS.

The indexes to the popular magazines are shelved in the Reading room. The indexes to technical literature are on the Index shelves; to medical literature are in the Medical library; to engineering literature, in the Engineering library; to agricultural literature, in the Agricultural library; and to legal literature in the Law library. The following indexes to the popular journals will be found in the Reading room:

Poole's index to periodical literature.
1802-1906—7 vols.
Indexes 427 periodicals.
Supplemented by:
Annual library index, 1901-1908.
Indexes 123 leading periodicals, and contains besides, a list of bibliographies, a necrology of authors and an index of dates for the year.
Readers' guide to periodical literature 1900-date.
Indexes 93 periodicals.

Annual magazine subject index.
Indexes 79 American and English periodicals; 44 from their first issues to December, 1907; 35 for 1907, and 13 more for 1908.
Street's pandex of the news, 1908-9.
Current events index, 1908.

BOUND PERIODICALS IN THE READING ROOM.

Appleton,
Arena,
Atlantic,
Bookman,
Century,
Chautauquan,
Cosmopolitan,
Critic,
Current literature,
Everybody's,
Forum.
Harper's magazine,
Independent,
Lippincott's,
Living age,
Nation,
Nineteenth century,
North American,
Outing,
Outlook,
Putnam's,
Review of reviews,
Scribner's,
World to-day,
World's work.

The rest of the bound periodicals are shelved in the stacks with the special classes to which they belong.

RULE FOR CIRCULATION OF PERIODICALS.

The last numbers of the following periodicals and the bound volumes of the sets shelved in the reading room are not to be drawn except for over-night use; to be drawn not earlier than 9:30 p. m. and to be returned before 8:05 a. m. the next morning or on Sunday before 2:05 p. m. The unbound back numbers of all periodicals in the pigeon holes in the reading room and the last numbers of those not listed below may be drawn for two days at a time.

American journal of sociology,
American magazine,
Appleton's magazine,
Atlantic monthly,
Book review digest,
Bookman,
Century,
Cosmopolitan,
Cumulative book index,
Current literature.
Education,
Educational review,
Elementary school teacher,
Everybody's magazine,
Forum,
Harper's bazar,
Harper's monthly,
Harper's weekly,
Independent,
International studio,
Ladies' home journal,
Lippincott's magazine,
Literary digest,
Littell's living age,
McClure's magazine,
Masters in art,
Missouri school journal,
Munsey's magazine,
Nation,
New England magazine,
North American review,
Outing,
Outlook,
Overland monthly,
Political science quarterly,
Popular science monthly,
Publisher's weekly,
Putnam's magazine,
Quarterly jour. of economics,
Review of reviews,
St. Nicholas,
School review,
Science,
Scientific American,
Scientific Amer. supplement,
Scribner's magazine,
Woman's home companion,
World to-day,
World's work.

NEWSPAPERS.

Following are the principal newspapers received by the library:

Chicago daily socialist,
Chicago record-herald,
Columbia daily tribune,
Columbia statesman,
Columbia weekly herald,
Kansas City journal,
Kansas City post,
Kansas City star,
New York sun,
St. Joseph news-press,
St. Louis globe-democrat,
St. Louis republic,
San Francisco chronicle,
University Missourian,
Westliche post,

The files of Missouri papers will be found in the Library of the State Historical Society, Room No. 13, Academic Hall.

The last seven issues of the dailies are always kept filed on the newspaper rack in the southwest corner of the room. Many of the county papers are received and papers from the smaller towns of the state. These are arranged alphabetically in the pigeon holes in the corner just behind the newspaper rack.

NEWSPAPER INDEXES.

The library has two newspaper indexes:

Current events index, 1908-date.
Quarterly with annual cumulations.
Street's Pandex of the news, 1908-1909.
Weekly with monthly, quarterly and annual cumulations.

These indexes are kept in holders in the case with the periodical indexes. They are alphabetical records of the subject matter of the newspapers of the United States, and are very useful in searching information on current topics which can not be found in any other form. They give the dates of events as well as brief notes about them.

NEW BOOKS.

The new books added to the library are first placed on open shelves in the Reading room in the case opposite the Loan desk, so that students and members of the Faculty may examine them before the books are sent to the stacks.

AIDS IN THE SELECTION AND PURCHASE OF BOOKS.

Any one desiring guides in the selection and purchase of books, will find them in Room No. 6. These are contained, for the most part, in catalogs of other libraries, trade bibliographies, auction sale and second-hand catalogs. The important catalogs of other libraries are the following, shelved on the Index cases:

Library of Congress (card) catalog.
Boston Athenaeum.
Detroit Public library.
Bibliotheque nationale.
Peabody's Institute library.
Carnegie library, Pittsburgh.

A. L. A. Catalog, 8,000 vols. for a popular library with notes, 1904.

These are valuable in showing what material there is upon various subjects as well as what books different libraries contain. The A. L. A. Catalog, 1904, is the best guide for the general reader. It contains titles of 8,000 books selected by the American Library Association in 1904 for the average public library.

TRADE BIBLIOGRAPHIES.

(List of books published in various countries, giving place of publication, publisher, date and price.)

AMERICAN.

Evans, C.,
American bibliography. 5 vol., 1639-1778. Other volumes to appear, bringing the list of books up to 1820. Books, pamphlets and manuscripts listed. Good descriptive and historical notes.

Roorbach, O. A.
Bibliotheca Americana. 1820-1855. Author list only.

American Catalog, 1876-date. Author and subject-list in separate alphabet. Up to 1895 it included a valuable list of government and state publications. This is an annual publication with five-year cumulations.

United States catalog.
Books in print, 1902.
Books printed in U. S. 1902-1905.
This is a dictionary catalog including authors, titles and subjects in one alphabet.

Cumulative book index, 1898-99, 1902-date. This is a monthly alphabetical list of current books, by author, title and subject; published in the United States with semi-annual and annual cumulations.

Book review digest 1905-date.
Published monthly with annual cumulations. This contains a list of the important publications in the U. S., with a digest of the reviews of the respective books.

Publishers' trade list annual, 1902-date.
Collection of publishers' catalogs in alphabetical order.

Publishers' weekly. A weekly list of current books published in the United States with annual cumulations. The annual is called the "Annual American Catalog."

ENGLISH.

Lowndes, W. T., Bibliographer's manual of English literature.
Author list of all important books published in Great Britain from the earliest times to 1834. Gives both the published price and the subsequent auction sale price of the work. Describes the various editions of a work.

London catalog of books, 1814-1846. Author list of books.

English catalog of books, 1835-date. Author, title and subject-list of books. Annual with frequent cumulations.

Reference catalog of current literature.
Biennial collection of publishers' catalogs in alphabetical order, with author and title index.

GERMAN.

Kayser, C. G.
Völtständiges bücherlexicon, 1750-date. Author list with a subject index for the cumulated volumes.

Heinrich, J. C.
Halbjahrs-Katalog, 1903-date.
Funfjahrs-Katalog, 1901-5.

Deutcher literaturkatalog, annual. 1907-date. A trade catalog of German books, issued by F. A. Brockhaus, Leipsic.

Kürschner's deutscher literatur-kalendar, 1901-date.
Annual in 2 parts.
Part 1, Survey of the year, necrology, notices of literary clubs, etc.
Part 2, Author list of publications, list of periodicals, notices of theatrical boards, etc. Very inclusive.

FRENCH.

Lorenz, Otto.
Catalogue generale de la librairie francaise, 1840-date.
Author list with subject index. Characterization of each author. Appears irregularly.

Catalogue mensuel de la librairie francaise, 1900-date. A monthly list with an annual index.

ITALIAN.

Pagliaini, A. Catalogo generale della libreria italiana, 1847-1899.
3 Vols. and supplements not yet completed.

CATALOGS OF SECOND HAND BOOKS.

The library is constantly receiving lists of books at auction, and second hand books to be had at the prices affixed. These may be consulted in the Librarian's office. The following books may be found helpful in giving a knowledge of prices and editions:

Livingston, L. S.
American book-prices current; a record of books, manuscripts, and autographs sold at auction in New York, Boston and Philadelphia . . . with the prices realized. 1906-date.

Brunet, J. C.
Manuel du librairie, 1860-80.

Lowndes, W. T.
Bibliographer's manual of English literature.

Sonnenschein, W. S.
Best books, ed. 2, 1891.
Reader's guide to contemporary literature, 1895.

AIDS FOR GENERAL READING.

On the wall case north of the Loan desk in the Reading room is the **Red-star collection.** This is a collection of books that have been selected to meet the demands of popular reading. Some of the latest novels and standard works of fiction, biography, history, travel, essays and the like are to be found here. These books may be drawn with a limit of 14 days on each book. Beside them, is a copy of Wilson & Co.'s Catalog of English prose fiction; a selected list of fiction entered by author and title with brief annotations. The entries checked are those contained in this library. This is a useful guide in choosing what to read.

The exhibition case in front of the Loan desk is used to display the new books received by the Library before they are sent to the stacks. The following books may be helpful:

Baldwin, The book lover.
Harrison, The choice of books.
Koopman, The mastery of books.
Leypoldt, List of books for girls and women.
Porter, Books and reading.
Right reading.
Sonnenschein, The best books.
A reader's guide to contemporary literature.
Spofford, A book for all readers.
Van Dyke and others, Counsel upon the reading of books.

AIDS FOR ORATORS AND DEBATERS.

The library has a good reference collection. Some information can be found on nearly any subject. It has been found that the debaters and public speakers make large use of the library. Those pursuing courses in oratory and argumentation will find the following books helpful:

Alden, The art of debate.
Baker & Huntington, Principles of argumentation.
Brookings & Ringwalt, Briefs for debate on current, political and social topics.
Buckley, Extemporaneous oratory.
Byars, Handbook of oratory.
Clark & Blanchard, Practical public speaking.
Johnson, American orations, 3 vols.
Mathews, Oratory and orators.
Matson, References for literary workers with introductions to topics and questions for debate.
Modern eloquence, 15 vols.
Pearson, Intercollegiate debates.
Power, Making of an orator.

Prather, Winning orations of the inter-state oratorical conte
2 vols.
Raymond & Miller, The speaker.
Ringwalt, Briefs on public questions with selected lists of
erences.
Sears, History of oratory.
Shurter, Masterpieces of modern oratory.
Vaeder, Legal masterpieces; specimens of argumentation and
position by eminent lawyers.
World's best orations, 10 vols.

SEMINARY ROOM.

The large lecture room in the basement below
main reading room has been fitted up for read
room and stack room purposes. The south side
constitute a reading room for graduate and semin
students. Books in constant demand by these
dents will be placed on open shelves and there
readily accessible without the formality of a rea
room slip. The professors in charge of the w
will furnish the librarian a list of all students
titled to admission to this room. Other students
not be admitted except in case the main rea
room is crowded.

The north end of the room contains stacks hol
all the books on the sciences not shelved in de
mental collections. A student assistant will b
charge of the room to assist readers in the
of getting books and the like. Admission to
reading room does not imply admission to the st
located there.

LAW LIBRARY.

The Law library contains 14,650 volumes and occupies five rooms on the first floor of the Law building. The main room contains the catalog, the encyclopaedias, dictionaries, the United States and State reports. The English reports occupy the northeast room; the bound periodicals the northwest room; the Digests and statutes the southeast room. The text-books are in the librarian's office. The students have free access to all the books, except the text-books, without formality. The text-books are issued on reading room tickets. The text-books may be drawn for overnight use. Failure to return a book of this class by 9 o'clock the next morning subjects the borrower to a fine of 25 cents. A few books of a popular nature, such as biographies may be drawn for a period of 10 days. The books other than those in the "Text-book" collection do not circulate outside of the building. The reading rooms have a seating capacity of 60 and are open from 8 a. m. to 1 p. m. and 2-5 p. m. and 7-9 p. m. Miss Bertha Bond is in charge.

AGRICULTURAL LIBRARY.

The Agricultural library contains upwards of 5000 volumes and occupies the second floor of the west end of the new Agricultural building. The old Agricultural library, the Agricultural experiment station library and a large number of books from the Horticultural and general libraries were brought together

in 1909 and formed the present Agricultural library. The Reading room will seat 50 people. It contains the Agricultural periodicals, both the current numbers and the bound volumes, the card catalog, the dictionaries and encyclopaedias, the herd books, and the librarian's desk. The stack room contains all the other books, consisting of the latest and most useful books on the various subjects studied. The library possesses a complete card index of all the publications of the U. S. Department of Agriculture. It also has the subject cards for publications of all state experiment stations.

The books on home economics and rural education are shelved in the General library. The horticultural and botanical books are located in the Horticultural building, and the dairy, and veterinary are on the farm. The library was opened last September. It is now in good condition with the books all catalogued, the cards filed.

The library is open from 8 a. m. to 12:30 p. m. and 2-5 p. m. Miss S. Blanche Hedrick is in charge.

The other departmental libraries are also listed in the Directory of the libraries.

REFERENCE BOOKS.

The Librarian will give a one-hour course of instruction on the use of reference books in the School of Journalism during the first semester 1910-11. For a description of the course see University of Missouri catalog 1909-10, page 333, Bibliography.

LIBRARY METHODS.

The Librarian will give a one-hour course of instruction in the School of Education on "Library Methods" during the year 1910-11. For a description of the course see University of Missouri catalog 1909-10, page 270, Library Methods.

GENERAL LIBRARY.

UNIVERSITY OF MISSOURI.

Regulations for the Circulation of Books, Periodicals, Etc. September 1, 1910.

1. During the College year the Library is open every week day from 7:55 a. m. to 6:00 p. m., and from 6:45 p. m. to 10:00 p. m., except Thanksgiving Day, the Christmas Holidays and Washington's Birthday. On Sundays the reading room is open from 2 to 5 p. m.

During the Christmas Holidays the Library is open every week day from 8:00 a m, to 12:00 m.. and 1:30 to 5:00 p. m., except Christmas Day and New Year's Day.

During the Summer Session, the Library is open from 7:55 a. m. to 5:30 p. m., and 7:00 to 10:00 p. m., except July 4th.

During the summer vacation the Library is open from 8:00 a. m. to 12 m., and from 1:30 to 5 p. m.

2. The book-stacks are not open to the public, in general, but admission to a specified section of the stacks may be given, temporarily, at the discretion of the Librarian, and a card of admission for a limited time may be issued to students who are doing special research work, and to others recommended by an officer of instruction.

3. Books may be drawn by all officers and students of the University. This privilege may be extended in the discretion of the Librarian to graduates and former students of the University, to other responsible private citizens of the State, to libraries, to clubs, and other organizations, under the regulations now in force governing the use of the Library by students, provided that the borrower pay the cost of transportation.

4. The last numbers of certain periodicals, a list of wh is posted at the Loan Desk, may not be drawn, except for ov night use, without the special permission of the Librarian or t assistant in charge.

Works of fiction may be drawn with a limit of 14 days on ea book, subject to renewal, provided the work is not in dema Fiction, as a rule, will not be loaned to out-of-town readers.

Works which are rare, costly or otherwise unsuited for g eral circulation, are lent only under special conditions and the discretion of the Librarian.

5. Books must not be taken from the Library until they ha been charged at the Loan Desk. Failure to have the bo charged will subject the borrower to a fine of one dollar.

6. All officers of the University may borrow as many boo as are needed for their work, provided the books are not in mand at the library. All such books must be returned before Co mencement day every year. Works of fiction may be drawn w a limit of 14 days on each book.

Students, student assistants, and others may borrow three boo at a time with a limit of 14 days on each book, Sundays and h days not included.

7. A fine of five cents a day will be imposed for each c that a book is kept over-time; the fine to be paid when the b is returned. If the book is not returned within ten days after is due, the borrower shall be required to pay the accumula fines and the value of the book. If the book is lost, he shall p the cost of the book, and the fines accumulated at the time notifies the library that the book is lost.

8. Students are permitted to renew books at the expirat of the 14-day period, except in the case of books in demand, boo asked for by another borrower, and books overdue.

9. Citizens other than officers and students of the Univers applying for the privilege of borrowing books for the first ti must sign a registration card at the Loan Desk. All persons w ing to borrow books for home use should apply during the ho 8 a. m. to 12 m., 1:30 to 5 p. m.

10. Any person who desires to obtain from the Library book already lent will receive prompt notice of its return, p vided he leaves a self-addressed postal or stamped envelope. the book is not in demand, it will be held subject to his order

hat a particular book held by him has been applied for and that ts return is desired.

11. No student shall be recommended for a degree until he ıas paid all fines and has returned in good order, or replaced very book that he has borrowed; or, in default thereof, has deosited with the Librarian the value of it in money; or, if it elong to a set. the value of the whole set in the case the single olume cannot be purchased separately.

12. The reference books in the reading room are not intended or circulation. They must on no account be removed from the eading room, except with the express permission of the assistant n charge of the reading room, and they are to be used with a due egard for the rights of others. Books in the reference library ınd "reserved books" may, at the discretion of the Librarian. be oaned to students after 9:30 p. m. for over-night use. and over Sunday. They must be returned before 8:05 a. m. Failure to do so, will subject the borrower to a fine of 25 cents and a possible withdrawal of the privilege. If not returned by 9 a. m., a messenger will be sent for the book and the expense paid by the borrower. If he should fail to secure the book the borrower shall pay 5 cents an hour until the book is returned.

13. The departmental libraries are in general, reference collections, not for circulation. They are open for consultation as a rule from 9 a. m. to 12 m., and from 2 to 5 p. m. The same rules and regulations obtain in the departmental libraries.

INDEX.

Page.

A. L. A. catalog, 1904 27
Acession books 9
Admission to book stacks 35
Agricultural cards 33
Agricultural experiment station library 33
Agricultural library 5, 33
Aids for general reading 30
Aids for orators and debaters 31
Aids in selection and purchase of books 27
Alumni collection 18
American trade bibliography 28
Appropriations 6- 7
Arrangement of books 14
Art works in reading room 14
Atlases 21
Bibliographies 20
Bibliotheque nationale catalog 27
Biography 21
Book stacks 35
    Admission 35
    Location 14
Books, arrangement 14
    Circulation 7, 16, 17, 18
    Fines 36, 37
    Inter-library loans 8
    Ordering 27
    Reference 20, 34
    Selection and purchase 27
Borrowing books 8, 16, 35- 37
Boston Athenaeum catalog 27
Buying books 27
Call Number 17
Card catalog 7, 17
Cataloging room 14
Catalogs, auction 30
    Bibliotheque nationale 27

Boston athenaeum 27
Card 11, 12
Carnegie library, Pittsburgh 27
Classed 11
Dictionary 7, 12
Detroit public library 27
Peabody institute library 27
Library of Congress 13, 27
Scientific literature 20
Second-hand 30
Circulation 7, 17, 18
How to borrow 16
Loan desk 15
Fines 17, 36, 37
Over-due books 36, 37
Over night books 37
Reference books 37
Reserved books 37
Books not for circulation 36
Regulations 35- 37
Citizens 8
Class marks 17
Classification 9
Columbia public library 8
Congressional library, see Library of Congress.
Current Periodicals 22
Dairy library 6
Debaters, aids for 31
Decimal classification 9
Delinquent students 37
Departmental libraries 5, 13, 37
Detroit public library catalog 27
Dewey decimal classification 9
Dictionaries 21
Dictionary catalog 12
Directory of the libraries 5
Document room 14, 19
Documents, see Government documents.
Duplicate room 14
Encyclopaedias 22
Engineering library 5

English trade bibliography 29
Exchanges 7
Faculty collection 18
Fiction, circulation 30, 36
Fines 17, 36, 37
    Overnight books 37
    For mutilation and loss of books 37
French trade bibliography 29
Funds 6, 7
General library 5
General reading, aids 30
Geological library 6
German trade bibliography 29
Government documents 19
Graduate students 32, 35
Hill, Pres. A. R., portrait 15
History 6
Horticultural library 6
Hours libraries are open 1, 35
Index case 19, 20, 21
Indexes 19, 20
    Government documents 19
    Engineering 23
    Law 23
    Medical 23
    Newspapers 26
    Periodicals 23
Injury to books 37
Inter-library loans 8
Italian trade bibliography 29
Jesse, Ex-Pres., R. H., portrait 15
Law Library 5, 33
Library, history 6
    Support 6
Library and incidental fee 7
Library of congress catalog 13
Library methods, instruction 35
Library staff 1
Loan desk 15
Local libraries 8

Magazines, see Periodicals.
Maps 21
Medical library 5
Catalog 8
Messenger service 37
Missouri State Historical Society Library 8, 26
Mutilation of books 37
New books 26
Newspapers. List 25
Indexes 26
Non-residents 8, 35
Observatory library 6
Officers of the University 35, 36
Orators, aids 31
Ordering books 27
Aids 27
Auction and other catalogs 39
Trade bibliography 28
Overdue books, fines for 17, 36, 37
Peabody Institute library catalogue 27
Periodicals, bound 24
Periodicals, number and location 22
Periodicals, circulation 24, 36
Periodicals, current 22, 36
Indexes 23
Periodicals, technical 23
Permits to book stacks 35
Public documents, see Government documents.
Readers' aids 30, 31
Reading Rooms 14
Red star collection 18, 30
Reference books .....
Fines 37
Instruction in use of 34
Location 20
Regulations 37
Registration of citizens 36
Regulations 24, 35
Replacing of book 37
Reserved books 37
Rules 24, 35

Sale catalogs 30
Second-hand catalogs 30
Selection of books, see Aids in selection.
Seminary room 32
Serials, see Periodicals.
Shelf list 11
Stock rooms 14
Staff 1
Subject catalog 11
Technical periodicals 23
Text book collection 18
Theses 18
Trade bibliographies 28
American 28
English 29
German 29
French 29
Italian 29
U. S. Dept. of Agri. cards 33
U. S. Documents. see Government documents.
University of Missouri publications 7
Veterinary library 6
Zoological library 6

THE UNIVERSITY OF MISSOURI BULLETIN

LIBRARY SERIES

VOLUME I NUMBER 4

BOOKS FOR FARMERS AND FARMERS' WIVES

BY

HENRY ORMAL SEVERANCE
Librarian, University of Missouri

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
April, 1912

CONTENTS

Introduction 3
Home economics 5
Animal husbandry 8
Dairy husbandry 10
Farm crops 12
Farm management 13
Farm mechanics 13
Forestry 14
Horticulture 15
Poultry 16
Rural economics and sociology 17
Soils 19
Publications, Agricultural experiment station 20
Publications, State board of Agriculture 21
List of experiment stations in the middle west 22

BOOKS FOR FARMERS AND FARMERS' WIVES

"If country life is to become all that it should be, if the career of the farmer is to rank with any other career in the country as a dignified and desirable way of earning a living, the farmer must take advantage of all that agricultural knowledge has to offer, and also of all that has raised the standard of living and intelligence in other callings."—Theodore Roosevelt in Introduction to the Report of the Commission on Country Life.

The purpose of this bulletin is to place before the farmers and farmers' wives of Missouri the names and the descriptions of a few useful books which may be of service to them in their work. I am convinced that many farm homes would possess books dealing with the various departments of home and farm activity if the farmers knew precisely what books would give them the information they desire. If the farmer should have in his home the best books on poultry where he could consult them daily, he would increase his poultry products many times. If he had constant access to the best methods of caring for his sheep, and hogs, and cows, and would be guided by the experience of other men who have been successful stock raisers, he would make money more rapidly.

A resident of Columbia purchased twelve pullets and five cockerels in December, 1910. He studied several poultry books continually and followed directions and suggestions as well as he could with his lack of conveniences, and at the end of the first year he had a net gain of ($28) twenty-eight dollars. It pays in dollars to have the best books in dealing with specific problems To make the most money out of poultry, a poultry raiser must master his subject. He must know the best methods of raising chicks, of feeding and housing his laying stock, and the like. The same is true in any other vocation. Many farmers have not had an opportunty to study these problems in the College of Agriculture. Their observation and experience

have not been sufficiently wide to make them adept in all departments of farming.

The farmer's wife, too, has her problems. There is the care of the babies, the preparation of the food, the decoration of the home, all of which may be done more efficiently by the mothers and wives who study those problems in the light of the experience of others. If the housewife is interested in foods let her consult some book in our list on foods. If she is specially interested in the healthy growth of her boys and girls, let her read Hutchinson's Handbook of health and Holt's Care and feeding of children. These are the books which apply to her problems.

If the industry of your county is dairying, then here is a list of books on dairying, any one of which would be useful to you. If your county is devoted to fruit raising, then this list of books on horticulture may be worth while.

The books are grouped by subject and only a few of the best books are listed. These books have been recommended by the several professors in the College of Agriculture who teach the several subjects included in these lists. The library possesses other books on these subjects, which will be loaned if the readers wish them. The library contains books on a multitude of subjects. If information is wanted which can not be supplied by the books listed below, address the Librarian and state your problem. A book treating your problem will be sent if it is in the library and not in use.

The individual books listed may be loaned to residents of the state, provided the borrower pay the cost of transportation. The amount of postage in each case is indicated. These may be loaned for a period of (14) fourteen days subject to a renewal of (14) fourteen days, making a total of (28) twenty-eight days. If a reader should desire a book for a longer period, he should write to the Librarian about it. The fine for not returning a book on time is five cents a day.

These books may also circulate in groups. If several

families in a community wish to study horticulture, all the books in this list may be sent as a travelling library on the request of two or more residents of the community. The library in that case may remain for a period of three months. Arrangements have been made with the Missouri Library Commission, Jefferson City, to send out these groups in travelling libraries. Application for a travelling library may be made on the enclosed blank card. The card may be mailed direct to the Secretary of the Commission, or to the Librarian of the University.

These lists may also serve as a guide to the purchase of books for the home library. The names and addresses of the publishers and the prices at which the books were published is given to facilitate their purchase. They may be secured through the local book-seller or from the publishers themselves. The library has none of them for sale.

HOME ECONOMICS.

A. GENERAL.

Hutchinson, Woods. Handbook of health. Illus. N. Y., Houghton, 1911. 347 pp. Publisher's price, $1.25; postage, 12c.

"This is a handbook of practical instruction for running the human body." "And seeing that, like other machines, it derives the whole of its energy from its fuel, the subject of foods, their properties, uses, and methods of preparation has been gone into with unusual care." Preface.

Richards, Ellen H. Cost of food: a study in dietaries. N. Y., Wiley, 1901. 161 pp. Publisher's price, $1.00; postage, 8c.

"A study of food requirements and economical means of meeting them."

Richards, Ellen H. Cost of cleanness. N. Y., Wiley, 1908. 114 pp. Publisher's price, $1.00; postage, 8c.

Contents: Clean house, personal cleanness and the disposal of personal wastes, the clean city, the cost of uncleanness, the way to future cleanness.

Richards, Ellen H. Cost of living as modified by sanitary

science. Ed 3, N. Y., Wiley, 1905. 164 pp. Publisher's price, $1.00; postage, 8c.

"Attempts to indicate best methods and the proper division of economics."

Van de Water, V. T. From kitchen to garret. (Young farmer's practical library). N. Y., Sturgis and Walton, 1910. 262 pp. Publisher's price, 75c; postage 8c.

"It aims to simplify household duties of wife and daughter."

B. CHILDREN.

Brown, D. R. Baby: a book for mothers and nurses. Boston, Whitcomb & Barrows, 1908. 200 pp. Publisher's price, $1.00; postage, 7c.

"The writer knows all that is to be known about babies."

Holt, L. E. Care and feeding of children: a catechism for the use of mothers and children's nurses. Ed. 3. N. Y., Appleton & Co., 1903. 143 pp. Publisher's price, 75c; postage, 7c.

"A standard work."

C. FOODS.

Barrows, Anna. Principles of cookery. Chicago, American School of home economics. 1907. (Library of home economics, v. 5). Publisher's price, $1.50; postage, 12c.

A course for home study.

Church, A. H. Food. Some account of its sources, constituents and uses. Lond. Chapman, 1900. 260 pp. Publisher's price, $1.00; postage, 8c.

Part 1. Of food in general.
Part 2. Of vegetable foods.
Part 3. Of animal foods.
Part 4. Of food adjuncts.
Part 5. Of diet and dietaries.

Conn, H. W. Bacteria, yeasts and molds in the home. Boston, Ginn. 299 pp. Publisher's price, $1.00; postage, 9c.

The work is designed for all persons who have practical charge of homes and are interested in keeping them in the best and most healthful condition.

Hutchison, Robert. Food and the principles of dietetics. Ed. 3. N. Y., Wood, 1911. 635 pp. Publisher's price, $3.00; postage, 30c.

A comprehensive treatment of the subject. The lectures were first given to students, then revised and enlarged and printed in book form. The author says: "It is hoped that it may also prove intelligent and interesting to anyone desiring to acquire some knowledge of foods and the difficult problems of nutrition.

Norton, Alice P. Food and dietetics. Chicago, American school of home economics, 1907. (Library of home economics v. 6). 227 pp. Publisher's price, $1.50; postage, 13c.

A course of home study.

Snyder, Harry. Human foods and their nutritive value. N. Y., Macmillan, 1908. 368 pp. Publisher's price, $1.25; postage, 13c.

"Its aims to present some of the principles of human nutrition along with a study of more common articles of food. Prominence is given to those—as flour, bread, cereals, vegetables, meats, milk, dairy products, and fruit, that are most extensively used in the dietary." Preface.

Other books of worth on this subject, which we do not circulate to non-residents, are:

Lincoln and Barrows. Home science cook book. Boston, Whitcomb and Barrows. Publisher's price, $1.00.

Farmer. Boston cooking school cook book. Boston, Little, Brown & Co. Publisher's price, $2.00.

Fireless cooker. Chicago, American school of home economics. Publisher's price, 10c.

D. HOME DECORATION.

Clark, T. M. Care of a house. A volume of suggestions to householders, housekeepers, landlords, tenants, trustees, for the economic and efficient care of dwelling houses. Illustrated. N. Y., Macmillan, 1903. 291 pp. Publisher's price, $1.50; postage, 14c.

"Valuable handbook on the repair and maintenance of houses, for non-technical readers."

Daniels, Fred H. Furnishing of a modest home. Illus.

Worcester, Mass., Davis Press, 1908. 114 pp. Publisher's price, $1.00; postage, 8c.

"The aim of the book is to promote good taste in the home." Introd. Treats of plan of the house, the walls and floors, the several rooms and their decoration, pictures, casts and small ornaments.

French, Lillie H. Homes and their decoration. N. Y., Dodd, 1903. Illustrated. 446 pp. Publisher's price, $3.00; postage, 21c.

A thorough discussion of decorations and furnishings of the home.

Kellogg, Alice M. Home furnishings, practical and artistic, with 55 illustrations from photographs. N., Y. Stokes, 1905. 278 pp. Publisher's price, $1.50; postage, 12c.

Object: "To give practical aid to the aspiring home artist. The author has considered the different parts of the house in turn, and suggested the appropriate furnishings and decorations for each." Preface.

Priestman, Dorthy T. Home decoration. Philadelphia, Penn Pub. Co., 1909. 208 pp. Publisher's price $1.00; postage, 10c.

Treats such subjects as selecting furniture, floor coverings, wall decorations, window trimmings, decorative ornaments, the nursery, the kitchen, home-made rugs, etc.

Richards, Ellen H. Cost of shelter. N. Y., Wiley, 1905. 142 pp. Publisher's price, $1.00; postage, 8c.

"A thorough discussion of housing problems."

Wheeler, Candace. Principles of home decoration, with practical examples. Illus. N. Y, Doubleday, 1903. 227 pp. Publisher's price, $1.80.

Deals with theory and specific applications.

ANIMAL HUSBANDRY.

Coburn, F. D. Swine in America. A text book for the breeder, feeder, and student. Illustrated. N. Y., Judd, 1910. 619 pp. Publisher's price, $2.50; postage, 22c.

This book deals with breeds and breeding, feeds, such as alfalfa, roots, corn, wheat, etc., housing, preparing for market, and diseases.

Craig, John A. Judging live stock. Des Moines, Iowa.

Kenyon Printing Co., 1910. 187 pp. Publisher's price, $1.50; postage, 13c.

Includes judging horses, cattle, sheep and swine.

Davenport, E. Domesticated animals and plants. A brief treatise upon the origin and development of domesticated races with special reference to the methods of improvement. Boston, Ginn, 1910. 335 pp. Publisher's price, $1.25; postage, 11c.

"After all, the main purpose of the book and the main hope of the writer is to interest the student in affairs of the farm, and to enlist on the part of high schools the same interest in the teaching of agriculture and the preparation for the affairs of country life as is now exercised in the teaching of other subjects and the preparation for other phases of life."

Harper, M. W. Manual of farm animals; a practical guide to the choosing, breeding, and keep of horses, cattle, sheep, and swine. N. Y., Macmillan, 1911. 570 pp. Publisher's price, $2.00; postage, 18c.

Henry, W. A. Feeds and feeding. A handbook for the student and stockman. Ed. 10. Madison, Wis., The Author, 1910. 619 pp. Publisher's price, $2.25; postage, 20c.

Part 1. Plant growth and animal nutrition.
Part 2. Feeding stuffs.
Part 3. Feeding farm animals.

Johnstone, J. H. S. The horse book. A practical treatise on the American horse breeding industry as allied to the farm. Chicago, Sanders, 1908. 299 pp. Publisher's price, $2.00; postage, 12c.

"The work is designed primarily to be of practical value to those who have in view the production of the types of horses in general request upon the farms and in the market places of the United States." Preface.

Jordan, W. H. The feeding of anlmals. N. Y., Macmillan, 1903. 467 pp. Publisher's price, $1.50; postage, 15c.

"A valuable contribution to agricultural literature. Not a statement of rules or details of practice, but an effort to present the main facts and principles fundamental to the art of feeding animals."—New England Farmer.

Kleinheinz, F. Sheep management. A handbook for the shepherd and student. The Author, Madison, Wis.,

1911. Illus. 245 pp. Publisher's price, $1.50; postage, 9c.

".....this handbook has been prepared to serve as a brief guide to sheep management. It treats only of the practical problems of the care and management of the flock which every shepherd engaged in the business has to confront." Preface.

Marshall, F. R. Breeding farm animals. Chicago, Breeder's Gazette, 1911. Ill. 287 pp. Publisher's price, $1.25; postage, 12c.

"The main object of this book is to direct attention away from profitless speculations that have necessarily characterized some earlier books and to stimulate interest in the more tangible, the physical basis of heredity." Preface.

Mumford, H. W. Beef production. Urbana, Ill., The Author, 1908. 209 pp. Publisher's price, $1.50; postage, 9c.

Contains: Fattening cattle for the market; breeding beef cattle for the market; elementary principles of stock feeding.

Plumb, Charles, S. Types and breeds of farm animals. Boston, Ginn, 1906. 573 pp. Publisher's price, $2.00; postage, 18c.

Part 1. Horse, mule, ass.
Part 2. Cattle.
Part 3. Sheep.
Part 4. Pigs.

United States. Department of Agriculture. Special report on diseases of cattle. Rev ed., 1908. Illus. 551 pp. Publisher's price, $1.00; postage, 22c.

Contains: Administration of medicines, diseases of the special organs, poisoning, surgical operations, infectious diseases, etc.

United States. Department of Agriculture. Special report on the diseases of the horse. Rev. ed. 1907. 608 pp. Illus. Publisher's price, 65c; postage, 22c.

Contains: Examination of a sick horse, methods of administering medicines, diseases of the special organs, general diseases, wounds, shoeing, etc.

DAIRY HUSBANDRY.

Conn, H. W. Bacteria in milk and its products. Designed for the use of students in dairying and for all others concerned in the handling of milk, butter, or cheese.

Phila., Blakiston, 1903. Illustrated. 314 pp. Publisher's price, $1.25; postage, 9c.

Eckles, C. H. Dairy cattle and milk production. Illus. N. Y., Macmillan, 1911. Publisher's price, $1.60; postage, 13c.

Each of the dairy breeds is discussed by the author, their characteristics and adaptation being pointed out; the selection of the individual, calf raising, the management of the cow, feeding and stable construction are also included.

Gurler, H. B.. The farm dairy. Chicago, Breeder's Gazette, 1908. 163 pp. Publisher's price, $1.00; postage, 9c.

Henry, W. A. Feeds and feeding. A handbook for the student and stockman. Ed. 10. Madison, Wis. The Author, 1910. 619 pp. Publisher's price, $2.25; postage, 20c.

Part 1. Plant growth and animal nutrition.
Part 2. Feeding stuffs.
Part 3. Feeding farm animals.

Lane, C. B. Business of dairying. How to conduct dairy farming for the largest profit. N. Y., Judd, 1909. Illustrated. 246 pp. Publisher's price, $1.25; postage, 13c.

Part 1. The soil.
Part 2. The crops.
Part 3. Dairy herd.
Part 4. Feeds and feeding.
Part 5. Products.
Part 6. Sales.

Plumb, Charles S. Types and breeds of farm animals. Boston, Ginn, 1906. 573 pp. Publisher's price $2.00; postage, 18c.

Part 1. Horse, Mule, Ass.
Part 2. Cattle.
Part 3. Sheep.
Part 4. Pigs.

Van Slyke, L. L. Modern methods of testing milk and milk products: a handbook prepared for the use of dairy students, butter makers, cheese makers, producers of milk, operators in condenseries, managers of milk shipping stations, milk inspectors, physicians, etc. N. Y., Judd, 1906. 226 pp. Publisher's price, 75c; postage, 9c.

Van Slyke, L. L. and Publow, Chas. A. The science and practice of cheese-making. A treatise on the manufacture of American cheddar cheese and other varieties. Illus. N. Y., Judd, 1910. 594 pp. Publisher's price, $1.75; postage, 16c.

"A work which represents both scientific and practical sides of cheese-making."

Wing, H. H. Milk and its products. A treatise upon the nature and qualities of dairy milk and the manufacture of butter and cheese. Ed. 13. N. Y., Macmillan, 1909. 325 pp. Publisher's price, $1.50; postage, 16c.

FARM CROPS.

Bowman, M. L. and Crossley, B. W. Corn growing, judging, breeding, feeding, marketing, for the farmer and student of agriculture. Ed. 2. Illus. Ames, Iowa, The Authors, 1911. 508 pp. Publisher's price, $2.50; postage, 17c.

Hunt, T. F. The cereals in America. N. Y., Judd, 1910. 449 pp. Publisher's price, $1.75; postage, 16c.

Discusses wheat, maize, oats, barley, rye, rice, sorghum, buckwheat.

Hunt, T. F. The forage and fiber crops in America. N. Y., Judd, 1910. 434 pp. Publisher's price, $1.75; postage, 16c.

"The characteristics of the forage and fiber crops are discussed, and the results of experiment and experience as to their climatic and soil adaptation, cultural methods, insect enemies, fungous diseases, harvesting, use and marketing are summarized with special reference to American conditions." Preface.

Spillman, W. J. Farm grasses of the United States. A practical treatise on the grass crop, seeding and management of meadows and pastures, descriptions of the best varieties, and the seed and its impurities, grasses for special conditions, etc. Illus. N. Y., Judd, 1909. 264 pp. Publisher's price, $1.00; postage, 10c.

Voorhees, E. B. Forage crops for soiling, silage, hay and pasture. N. Y., Macmillan, 1907. 421 pp. Publisher's price, $1.50; postage, 16c.

"The work is intended to give brief and practical farming suggestions that will be helpful in the growing and using of forage crops." Preface.

Wing, J. E. Alfalfa farming in America. Chicago, Sanders, 1909. 480 pp. Publisher's price, $2.00; postage, 16c.

FARM MANAGEMENT.

Hunt, Thos. F. How to choose a farm, with a discussion of American lands. N. Y., Macmillan, 1906. 430 pp. Publisher's price, $1.75; postage, 18c.

Chapters 1-11 treat of the selection of a farm for profit, with some illustrations of the principles involved. Chapters 12-19 deal with the thirty different regions into which the author has divided America for the purpose of treatment.

Full of advice to those wanting to buy land, to make estimates of the value of farm property, or to know the agricultural resources and possibilities of different localities."

Roberts, I. P. The farmer's business handbook. A manual of simple farm accounts and brief advice on rural law. Ed. 3. N. Y., Macmillan, 1909. 313 pp. Publisher's price $1.25; postage, 13c.

Part 1. Farm accounts.
Part 2. Rural law.
Part 3. Inventories from the census.

Roberts, I. P. The farmstead. The making of the rural home and the lay-out of the farm. Ed. 5. N. Y., Macmillan, 1910. 356 pp. Publisher's price, $1.50; postage, 16c.

Treats of the selection of the farm, the lay-out, the house, barns, yards, sanitation, household economy and comfort.

Steiner, H. L. How to keep farm accounts. A practical book for the practical farmer and a text bok for use in agricultural schools. Toledo, O. The Author, 1908. 152 pp. Publisher's price, $1.00; postage, 7c.

FARM MECHANICS.

Davidson, J. B. and Chase, L. W. Farm machinery and farm motors. N. Y., Judd, 1911. Illus. 521 pp. Publisher's price, $2.00; postage, 18c.

Part 1. Farm machinery.
Part 2. Farm motors.
Discusses all the more important machines used in modern farming operations.

Farm buildings. New and enlarged edition. A compilation of plans for general farm barns, cattle barns, dairy barns, horse barns, sheep folds, swine pens, poultry houses, silos, feeding racks, farm gates, sheds, portable fences, concrete construction, handy devices, etc. Chicago, Sanders Publishing Co., 1909. 354 pp. Publisher's price, $1.75; postage, 18c.

This book is a compilation of the best farm building plans published in the Breeders Gazette during recent years.

FORESTRY.

Graves, Henry S. Principles of handling woodlands. N. Y., Wiley, 1911. 347 pp. Publisher's price, $1.50; postage, 16c.

"The book deals primarily with the principles of cutting mature stands of timber with a view to their replacement by new growth; cutting immature stands made for their improvement; and forest protection, with particular reference to forest fires." Preface.

Green, Samuel B. Principles of American forestry. N. Y., Wiley, 1903. 348 pp. Publisher's price, $1.50; postage, 14c.

"This is a book on elementary forestry, and has been prepared especially for students and others beginning this subject. It is also intended for the general reader who wishes to secure a general idea of the subject of forestry in North America." Preface.

Keller, Harriet L. Our native trees and how to identify them. A popular study of these habits and their peculiarities. Illus. Fifth ed. N. Y., Scribner, 1907. 557 pp. Publisher's price, $2.00; postage, 18c.

Roth, Filbert. First book of forestry. Boston, Ginn, 1902. 301 pp. Publisher's price, $1.00; postage, 10c.

"An effort has been made to present in simple, non-technical language some of the general principles underlying the science, and to state the methods which are employed and the objects to be obtained in the practice of forestry." Preface.

Pinchot, Gifford. A Primer of forestry. Part 1. The forest.

Part 2. Practical forestry. U. S. Department of Agriculture. Farmer's bulletin No. 171 (Part 1); No. 358 (Part 2).

"Part 1 deals with the units which compose the forest, with its character as an organic whole and with its enemies." Preface.

"Part 2 deals with the practice of forestry, with work in the woods, and with the relation of the forest to the weather and the streams, and concludes with a short account of forestry at home and abroad." Preface.

HORTICULTURE.

Bailey, L. H. Garden-making. Suggestions for the utilizing of home grounds. Illus. N. Y., Macmillan, 1909. 425 pp. Publisher's price, $1.50; postage, 17c.

Treats of ornamental gardening, of fruits and vegetables for home use.

Bailey, L. H. Horticulturists' rule-book. A compendium of useful information for fruit growers, truck-gardeners, florists and others. Ed 2. N. Y. Macmillan. 221 pp. Publisher's price, 75c; postage, 8c.

Bailey, L. H. Nursery-book. A complete guide to the multiplication of plants. Ed. 14. N. Y., Macmillan, 1910. 377 pp. Publisher's price, $1.50; postage, 16c.

"This little handbook aims at nothing more than an account of the methods commonly employed in the propagation and crossing of plants." Preface.

Bailey, L. H. Principles of fruit growing. N. Y., Macmillan, 1909. Ed. 12. 534 pp. Publisher's price, $1.50; postage, 13c.

Contains: Location, tillage, fertilization, care of fruit grounds, diseases, harvesting and marketing fruits.

Bailey, L. H. Principles of vegetable gardening. N. Y., Macmillan, 1910. Ed. 9. 468 pp. Publisher's price, $1.50; postage, 18c.

Part 1. General view.
Part 2. Vegetable gardening crops.

Treats of "making hot-beds, cold frames, the soil and its treatment; all about seeds; lay-out of the garden, marketing and storing produce." The treatment of each vegetable is taken up.

Bailey L. H. The pruning book. A monograph on the pruning and training of plants as applied to American

conditions. N. Y., Macmillan, 1909. 555 pp. Publisher's price, $1.50; postage, 16c.

Part 1. Fundamentals—fruit buds, healing of wounds, and principles of pruning.

Part 2. Incidentals—some specific modes of training, American grape training.

Fraser, S. The potato. A practical treatise on the potato, its characteristics, planting, cultivation, harvesting, storing, marketing, insects, and diseases, and their remedies, etc., etc. Illus. N. Y., Judd, 1910. 201 pp. Publisher's price, 75c postage, 8c.

Fuller, A. S. Small fruit culturist. N. Y., Judd, 1891. 298 pp. Publisher's price, $1.00; postage, 11c.

Contains: Barberry, strawberry, raspberry, blackberry, cherry, currant, gooseberry, cranberry, huckleberry, etc.

Hunn, C. E. and Bailey, L. H. Practical garden-book containing the simplest directions for the growing of the commonest things about the house and garden. Ed. 2. N. Y., Macmillan, 1901. 250 pp. Publisher's price, $1.00; postage, 8c.

POULTRY.

American standard of perfection. Illustrated. A complete description of all recognized varieties of fowls. American poultry association, 1910. 331 pp. Publisher's price, $1.50; postage, 14.

Class 1. American breeds — Plymouth rocks, Wyandottes, Javas, Rhode Island reds, etc.
Class 2. Asiatic breeds—Brahmas, cochins, langshans.
Class 3. Mediterranean breeds—leghorns, minorcas, etc.
Class 4. English breeds—dorkings, orpingtons, redcaps.
Class 5. Polish breeds.
Class 6. Hamburgs.
Class 7. French.
Class 8. Games and game bantams.
Class 9. Orientals.
Class 10. Ornamental bantams.

Hawks, Earl B. Science and art of poultry culture. A practical text book of poultry husbandry in its various branches. Illus. The Author, 1909. 500 pp. Publisher's price, $2.75; postage, 14c.

Kains, M. G. Profitable poultry production. N. Y., Judd, 1910. 288 pp. Publisher's price, $1.50; postage, 12c.

"This book is written to present the case fairly and squarely so the farmer may see the advantages that poultry offers as a means of making money. The book lays special emphasis upon all the important practices and new wrinkles that have been found profitable by professional breeders and poultrymen." Preface.

Purvis, Miller. Poultry breeding. A complete guide for keepers of poultry. Chicago. Sanders Publishing Co., 1910. 323 pp. Publisher's price, $1.50; postage, 11c.

The topics are arranged in alphabetical order like the topics in an encyclopedia.

Robinson, John H. Principles and practice of poultry culture. Illus. (Country life education series). Boston, Ginn, 1912. 627 pp. Publisher's price, $2.50; postage, 20c.

Part 1. Poultry industry.
Part 2. Production—location, coops, buildings, fences, fittings, foods, incubation, growth and marketing, egg production, etc.
Part 3. Reproduction—types, breeds, etc.
Part 4. Poultry, fancy—exhibits and judging.

RURAL ECONOMICS AND SOCIOLOGY.

Bailey, L. H. Country life movement in the United States. N. Y., Macmillan, 1911. 231 pp. Publisher's price, $1.25; postage, 11c.

This volume deals with the present movement for the redirection of rural civilization, discussing the real country-life problem as distinguished from the city problem, known as the back-to-the-land movement.

Bailey, L. H. The state and the farmer. N. Y., Macmillan, 1908. 189 pp. Publisher's price, $1.25; postage, 9c.

Professor Bailey here discusses the relation of the farmer to the government in its varying aspects. He deals specifically with the change in agricultural methods, in the shifting of the geographical centers of farming in the United States, and in the growth of agricultural institutions.

Butterfield, K. L. Chapters in rural progress. Chicago, University of Chicago Press, 1908. 262 pp. Publisher's price, $1.00; postage, 9c.

Contents: The study of rural life, problems of progress, expansion of farm life, the new farmer, culture from the corn-lot, education for the farmer, farmers' institutes, rural school, the grange, opportunities for farm women, the country church and progress, summary of progress, social side of farm question, federation for rural progress, etc.

Butterfield, K. L. The country church and the rural problem. Chicago, Univ. of Chicago Press, 1911. 162 pp. Publisher's price, $1.00; postage, 8c.

Carver, T. N. Principles of rural economics. Boston, Ginn, 1911. 386 pp. Publisher's price, $1.30; postage, 13c.

An exceptionally clear treatment—the best yet published—of agriculture and the rural problems in their relation to national economy. After a brief history of agriculture in America, the author takes up the factors of agricultural production and management, the distribution of the agricultural income and the problems of rural social life, emphasizing throughout public and social aspects more, and the business aspect less, than has been done in earlier works.

Coulter, J. L. Co-operation among farmers the keystone of rural prosperity (Young farmer's practical library). N. Y., Sturgis & Walton, 1911. 281 pp. Illus. Publisher's price, 75c; postage, 8c.

Plea for co-operative selling, buying and organization in the rural districts in order to bring about educational and social betterment.

Fairchild, G. T. Rural wealth and welfare. N. Y., Macmillan. Publisher's price, $1.25; postage, 12c.

Discusses agriculture as the chief factor in the production of wealth. Special chapters are devoted to the analysis of forces in the production of wealth, aims of industry, methods of association, special incentives to production, showing the rate of increase and value of farms, farm stock, farm crops, etc.

Field, Jessie. The corn lady: the story of a country teacher's work. Chicago. Flanagan Co., 1911. 107 pp. Publisher's price, $1.20; postage, 10c.

Harris, H. F. Health on the farm (Young farmer's practical library). N. Y. Sturgis & Walton, 1911. 306 pp. Publisher's price, 75c; postage, 8c.

A simple, practical volume covering all phases of personal and some general rural hygienic problems and differing from other books in being especially adapted to southern conditions.

Hays, W. M. Farm development. N. Y., Judd, 1910. Illus. 391 pp. Publisher's price, $1.50; postage, 15c.

A comprehensive manual discussing farming as a vocation, the selection of a farm home, planning the farm, subduing the land, drainage, irrigation, roads, bridges and fences.

Ogden, H. N. Rural hygiene. (Rural science series). N. Y., Macmillan. Illus. 434 pp. Publisher's price, $1.50; postage, 10c.

"An excellent work,—it is untechnical, suited to the average reader and to village health officers." A. L. A. Booklist.

National Society for the Study of Education. Tenth year book, part 2. The rural school as a community center. Chicago. University of Chicago press. Publisher's price, 75c; postage, 5c.

A collection of eight papers discussing the problem of wider social usefulness for rural schools, with concrete examples of methods already in practice.

Powell, E. P. How to live in the country. N. Y. Outing, 1911. Illus. 300 pp. Publisher's price, $1.75; postage, 14c.

"Those who will find it really most interesting and valuable are the amateur farmers, already 'in being'. To them its practical advice and suggestions will be altogether useful."

U. S. Commission on Country Life. Report with an introduction by Theodore Roosevelt. N. Y. Sturgis & Walton, 1911. 150 pp. Publisher's price, 75c; postage, 8c.

"The purpose of the Commission was to determine the present status of country life in the United States, to point out its main deficiencies and to suggest lines of action and inquiry."

SOILS.

Hopkins, C. G. Soil fertility and permanent agriculture. Ginn, Boston, 1910. 676 pp. Publisher's price, $2.25; postage, 20c.

"It is the first business of every farmer to reduce the fertility of the soil, by removing the largest crops of which the soil is capable; but ultimate failure results for the land owner unless provision is made for restoring and maintaining productiveness. * * * It is the purpose of this book to teach the science of soil fertility and permanent agriculture, chiefly by reporting facts rather than by offering theories." Introduction.

King, F. H. The soil, its nature, relations, and fundamental

principles of management. N. Y., Macmillan, 1909. 318 pp. Publisher's price, $1.50; postage, 15c.

"The soil has been considered as a scene of life, where altered sunshine maintains an endless cycle of changes, rather than as mere chemical and mechanical mixture, and so far as possible the problems have been given definiteness by treating them quantatively." Preface.

Roberts, I. P. Fertility of the land. A summary sketch of the relationship of farm practice to the maintaining and increasing of the productivity of the soil. N. Y., Macmillan. Ed. 10. 438 pp. Publisher's price, $1.50; postage, 17c.

Vivian, A. First principles of soil fertility. N. Y., Judd, 1908. Illus. 273 pp. Publlsher's price, $1.00; postage, 10c.

Contains: 1. Plant food—its nature and source.
2. Making potential plant food available.
3. Barnyard manure.
4. Commercial fertilizers.

Voorhees, E. B. Fertilizers, the source, character and composition of natural, home-made and manufactured fertilizers; and suggestions as to their use for different crops and conditions. N. Y., Macmillan, 1910. Ed. 11. 349 pp. Publisher's price, $1.25; postage, 13c.

There is much valuable material published by the United States Department of Agriculture, by State agricultural experiment stations, and by the State boards of agriculture. This material is free. The experiment station of the College of Agriculture of the University of Missouri has published 99 bulletins, 53 circulars, and 4 research bulletins. Ask to have your name placed on the mailing list to receive all publications of the Station. Following is a list of those available for free distribution. Address the Director of the Agricultural Experiment Station, Columbia, Mo.

Bulletin 54. The strawberry false worm. The strawberry leaf-roller.
Bulletin 55. Pruning peach trees.
Bulletin 71. The fruit tree leaf-roller.
Bulletin 83. Soil experiments on the upland loam of southeast Missouri.

Bulletin 84. Soil experiments on the prairie silt loam of southwest Missouri.
Bulletin 87. Co-operative variety tests of corn. Variety tests of corn at Columbia.
Bulletin 88. Soil management in the Ozark region.
Bulletin 89. Forest conditions of the Ozark region of Missouri.
Bulletin 92. Soils of Sullivan County.
Bulletin 93. Soils of Audrain County.
Bulletin 97. Co-operation among fruit growers.
Bulletin 98. San Jose Scale in Missouri.
Bulletin 99. Inspection of commercial fertilizers, 1911.
Bulletin 100. Influence of fatness of cow at parturition on percent of fat in milk.
Bulletin 101. Report of Director, 1911.
Bulletin 102. Combating orchard and garden enemies.
Bulletin 103. Silo for Missouri farmers.
Circular 37. Variations in cream tests.
Circular 38. The principles of maintaining soil fertility.
Circular 40. The seeding of alfalfa.
Circular 41. Directions for testing milk on the farm.
Circular 42. The seeding of clovers and grasses.
Circular 43. Wheat growing in Missouri.
Circular 44. Feeding for milk production.
Circular 46. Factors influencing the yield of oats.
Circular 47. Raising calves on skim milk.
Circular 48. The plastered or Gurler silo.
Circular 50. Selection of corn for seed and show.
Circular 51. How to prolong the life of fence posts.
Circular 52. Growing a woodlot from seed.
Circular 53. The seeding of cowpeas.

The State Board of Agriculture has published reports from 1865 to date and 10 volumes of bulletins. The following bulletins are still available for free distribution. Address the Secretary of the State Board of Agriculture, Columbia, Mo.

Bulletin 12, (Vol. 5). Meat inspection.
Bulletin 6, (Vol. 6). Raising calves on skim milk.
Bulletin 7a, (Vol. 6). Some experiments on Missouri soils.
Bulletin 11, (Vol. 6). Apiary inspection.
Bulletin 3, (Vol. 7). Home Makers' conference association, 1909.
Bulletin 10, (Vol. 7). The brood sow and her litter.
Bulletin 11, (Vol. 7). The silo.
Bulletin 12, (Vol. 7). Crop review for 1909.
Bulletin 8, (Vol. 3). Corn growing in Missouri.
Bulletin 4, (Vol. 8). Ornamental planting for the farm home.
Bulletin 5, (Vol. 8). Cement for the farm home.
Bulletin 8, (Vol. 8). Steps in agriculture.
Bulletin 10, (Vol. 8). First prize five-acre farm plan.
Bulletin 11, (Vol. 8). Second prize five-acre farm plan.
Bulletin 12, (Vol. 8). Crop review for 1910.
Bulletin 5, (Vol. 9). Partial list of pure bred live stock.
Bulletin 8, (Vol. 9). Methods of corn cultivation in Missouri.
Bulletin 10, (Vol. 9). General Forms for roads and culverts.

Bulletin 11, (Vol. 9). Butchering hogs on Missouri farms.
Bulletin 12, (Vol. 9). Crop review for 1911.
Booklet: A tip on Missouri corn.
Bulletin 1, (Vol. 10). Growing cowpeas in Missouri.

The State Poultry Board has issued two valuable bulletins which will be sent on request. T. E. Quisenberry is Secretary, Mountain Grove, Missouri.

By addressng the Secretary of the Department of Agriculture, Washington, D. C., and requesting that your name be placed on his mailing list you may receive the year books, the farmers' bulletins, and other publications as issued. You could get a list of the publications of this department which are available for free distributon and for sale and then ask for only those in which you are interested.

A list of the experiment stations in the middle west is added for the convenience of those who may have occasion to write to them for information or for some of their bulletins.

Illinois experiment station, Urbana, Ill.
Indiana experiment station, La Fayette, Ind.
Iowa experiment station, Ames, Iowa.
Kansas experiment station, Manhattan, Kansas.
Michigan experiment station, Agricultural College, Mich.
Minnesota experiment station, Minneapolis, Minn.
Wisconsin experiment station, Madison, Wis.

Readers of this bulletin who may wish a list of the best journals, in dairy husbandry, horticulture, animal husbandry and the like or a list of general agricultural periodicals should address F. B. Mumford, Dean of the College of Agriculture of the University of Missouri and Director of the Experiment Station. Information on this and other subjects of interest to farmers will be given cheerfully.

INDEX

Alfalfa 13, 21
American cheddar cheese. 12
Animal husbandry 8-10
Apiary 21
Bacteria 6, 10
Bantams 16
Barberries 16
Barley 12
Barnyard manure 20
Beef production 10
Blackberries 16
Borrowing books..... 4
Brahmas 16
Buckwheat 12
Butter 10, 11, 12
Calves 21
Cattle 10, 11, 21
Cement 21
Cheese 10, 11, 12
Cherries 16
Children 6
Church 18
Circulation of books..... 4
Clovers 21
Cochins 16
Cold frames 15
Cook books 7
Co-operation 18, 21
Corn 12, 21, 22
Cost of food..... 5
Cost of living..... 5
Cost of shelter 8
Country life 17, 19
Cowpeas 21, 22
Cranberries 16
Cream tests 21
Crops 11, 12
Culverts 21
Currants 16
Dairy husbandry....10, 11, 12, 21
Dietetics, see Foods.
Dorkings 16
Education 18, 19
Experiment stations..... 22
Farm accounts 12
Farm animals 8-10
Farm buildings 14
Farm crops 12-13
Farm machinery 13
Farm management 13
Farm mechanics 13, 21
Farmers' institutes 18
Farming as a vocation.... 18
Farms 13
Fence posts 21
Fertilizers 20, 21
Fines 4
Fireless cooker..... 7
Foods 5, 6, 7
Forage crops 12
Forestry 14, 21
Fruit growing 15, 16, 21
Furnishing a home..... 7, 8
Gardening 15, 16
Gooseberries 16
Granges 18
Grapes 16
Grasses 12, 21
Hogs 8, 10, 21, 22
Health 5, 18, 19
Home decoration 7, 8
Home economics 5, 21
Horses 9, 10
Horticulture 15
Hot beds 15
Huckleberries 16

Javas 16
Langshans 16
Leghorns 16
Live stock 8, 21
Meat inspection 21
Milk 10, 11, 12, 21
Minorcas 16
Mules 10
Missouri agriculture experiment station 20, 21
Missouri State board of agriculture 21
Nursery books 15
Oats 12, 21
Orpingtons 16
Peach trees 20
Plants 11
Plymouth rocks 16
Potato 16
Poultry 16, 17, 22
Pruning 16, 20
Raspberries 16
Rice 12
Rhode Island reds..... 16
Roads 21
Rural economics 17, 18
Rural schools 18, 19
Rye 12
Sales 11
San Jose scale..... 21
Seeds 15
Sheep 9, 10
Soil experiments.....20, 21
Soils 11, 19, 20
Sociology 17, 18, 19
Sorghum 12
Strawberries 16, 20
Swine, see Hogs.
Traveling libraries 5
Trees 14
Tuck gardening 15
U. S. department of agriculture 22
Vegetable gardening.....15, 16
Wheat 12, 21
Woodlands 14
Wyandottes 16

THE UNIVERSITY OF MISSOURI BULLETIN

LIBRARY SERIES
VOLUME 2 NUMBER 1

PARTIAL BIBLIOGRAPHY AND INDEX

OF THE

Publications of the College of Agriculture and the Agricultural Experiment Station

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
July, 1912

Partial Bibliography and Index

of the

Publications of The College of Agriculture

and the

Agricultural Experiment Station

PREFACE.

The purpose of this bulletin is to make available the material published by the College of Agriculture and the Agricultural Experiment Station and to record, in permanent form, the serial publication of the College and the Station. The Station has published fifty-three circulars and one hundred and three bulletins. The following list includes only forty-five of the former and eighty-two of the latter. This may be explained from the fact that beginning with number eighty-three, the bulletins are paged continuously to include number ninety-six, which constitutes a volume, for which a title page, table of contents and index has already been published. Hereafter, indexes will be published on the completion of volumes. Circulars one to forty-three have been bound. However, beginning with number thirty-six, the paging is continuous for the present volume, on the completion of which, an index will be issued. The reports of the Director have been irregular in publication. The list is given below as a record for readers who wish to have complete files. The Research bulletins are not included as only five numbers have been issued. When volume one is completed, a title page and index will be issued. There has been no attempt to preserve and record the press bulletins, one of which is issued for practically every publication of the station. The preliminary indexing was done by Miss Louise Wheeler, assistant in the General Library.

HENRY ORMAL SEVERANCE,
Librarian, University of Missouri.

June 28th, 1912.

MISSOURI STATE AGRICULTURAL COLLEGE FARM BULLETINS.

(These bulletins are out of print.)

There were twenty bulletins issued under the title, "Missou State agricultural college farm bulletins." Numbers 1—8 wer published in the "Annual Catalogue of the Missouri University a Columbia, Missouri, 1883-1884." Numbers 9—14 were publishe in the catalogue for 1884-1885; and numbers 15—19 in the cata logue for 1885-1886.

Bulletins 21—35 were issued under the title: "Missouri Stat Agricultural College bulletin"; numbers 19—29, and 22—27 wer published in the Annual report of the State Board of Agricultur for 1886-1887; numbers 28—30 in the report for 1887-1888; an 31—35 in the report for 1888-1889. Numbers 9—12, 14, 21, an 28—33 were also issued separately. Bulletin 35 is also bulleti number 2 of the Agricultural experiment station. Numbers 1 16, and 24 were also published in the report of the Dean of th College of Agriculture, 1887.

MISSOURI STATE AGRICULTURAL COLLEGE FARM BULLETINS.

(These bulletins are out of print.)

1. [Feeding hogs.] [By J. W. Sanborn.] 1883. 3p.
2. Feeding steers. [By J. W. Sanborn.] 1883. 5p.
3. Report of test of varieties of wheat and corn. [By J. W. San born.] 1883. 3p.
4. Mulching. [By J. W. Sanborn.] 1883. 4p.
5. Relation of tillage to soil moisture. [By J. W. Sanborn. 1883. 3p.
6. Relation of dew to soil moisture. [By J. W. Sanborn. 1883. 5p.
7. Feeding wheat and corn. [By J. W. Sanborn.] 1884. 4p.
8. Meal feeding stock at pasture. [By J. W. Sanborn.] 1884. 4
9. Grass-fed pigs. [By J. W. Sanborn.] 1884. 3p.
10. Pig feeding experiments. [By J. W. Sanborn.] 1884. 4p.
11. [Corn fodder as stock food.] [By J. W. Sanborn.] 1884. 4
12. [Seed potatoes.] [By J. W. Sanborn.] 1884. 4p.

13. Good roads and broad wheel tires. [By J. W. Sanborn.] 1884. 7p.
14. Feeding for lean meat. [By J. W. Sanborn.] 1885. 6p.
15. Contagious Pleuro-pneumonia. [By Paul Paquin.] 1885. 5p.
16. Glanders. Second report of state veterinarian. [By Paul Paquin.] 1885. 8p.
17. General observations. [By J. W. Sanborn.] 1885. 4p.
18. [Sub-soiling.] [By J. W. Sanborn.] 1885. 5p.
19. Feeding for lean meat. [By J. W. Sanborn.] 1886. 6p.
20. Report of investigations and observations in the Horticultural department. [By L. R. Taft.] 1886. 6p.
21. Plants and their uses. [By S. M. Tracy.] 1888. Chart.
22. Corn harvesting. [By J. W. Sanborn.] 1886. 6p.
23. Relation of dew to soil moisture. [By J. W. Sanborn.] 1886. 14p.
24. Report of state veterinary inspector. [By Paul Paquin.] 1886. 22p.
25. [Data regarding several economic problems in ordinary farm practice.] [By J. W. Sanborn.] 1886. 7p.
26. [Report of trials of varieties of vegetables and fruits.] [By L. R. Taft.] 1887. 7p.
27. Feeding for flesh. [By J. W. Sanborn.] 1887. 15p.
28. Maintenance ration for pigs. [By J. W. Sanborn.] 1887. 25p.
29. Rotation of crops. [By J. W. Sanborn.] 1887. 10p.
30. Fertilization. [By J. W. Sanborn.] 1887. 14p.
31. Texas fever and other diseases. [By Paul Paquin.] 1887. 13p.
32. Plows and plowing. [By J. W. Sanborn.] 1888. 19p.
33. Glanders, mad itch of cattle, etc. [By Paul Paquin.] 1888. 15p.
34. Experimental farming. [By J. W. Sanborn.] 1888. 10p.
35. Grasses for pastures and for meadows. [By J. W. Sanborn.] 1888. 9p.

AGRICULTURAL EXPERIMENT STATION BULLETINS.

The following numbers of the bulletins are out of print:

1 to 53, 56 to 70, and 72 to 82. An index has been issued for bulletins 83 to 96. Future volumes will be indexed as published. An index will be issued with the completion of each volume of the Research bulletins.

1. Announcement to farmers; the so called "Hatch Bill"; Assent of Governor; plan of organization; work and experiments proposed this season; personnel of station. [By P. Schweitzer.] 1888.

2. Grasses for pastures and for meadows. [By J. W. Sanborn. 1888.
3. Generalities and experiments in spraying cattle. Appendix o glanders. By Paul Paquin.
4. A list of tillage implements. By J. W. Sanborn. 1888.
5. Soil, weather, field trials with corn. By P. Schweitzer. 188
6. Experiments on seed germination, pea weevil and apples. [B J. W. Clark.]
7. Experiments on green versus dry storage of fodder. [By W. Sanborn.]
8. Experiments on feeding ensilage against dry fodder. [B J. W. Sanborn.]
9. Study of the life history of corn at its different periods c growth. By P. Schweitzer. 1889.
10. Analysis of apples at various stages of growth. Bordeau mixture for grape rot. Comparative tests of small fruits an potatoes. [By J. W. Clark.] 1890.
11. Texas fever. By Paul Paquin. 1890.
12. Black leg. By Paul Paquin. 1890.
13. Reports on spraying for the codling moth, apple scab and blac rot of the grape. Reports on strawberries, raspberries, blacl berries, tomatoes, peas and potatoes. List of new fruits re ceived for testing. [By J. W. Clark.] 1891.
14. Field experiments with corn. [By H. J. Waters.] 1891.
15. Wheat—test of varieties, 1889, 1891. Oats—test of varieties 1889, 1891. Change of seed—wheat, oats and potatoes. [B H. J. Waters.] 1891.
16. Covering peach trees to protect the fruit buds. Spread of pea blight, temperature and rain tables, strawberry tests, potat trials, seedling fruits. [By J. W. Clark.] 1891.
17. Sugar beets. [By Chas. Fox.] 1892.
18. Strawberries. [By Chas. Keffer.] 1892.
19. Soils and fertilizers, Part 1. [By P. Schweitzer.] 1892.
20. Soils and fertilizers, Part 2. [By Paul Schweitzer.] 1893.
21. Field experiments with wheat. [By C. M. Conner.] 1893.
22. Seedling strawberries. [By Chas. Keffer.] 1893.
23. Grape culture. [By Chas. Keffer.] 1893.
24. Comparative tests of different breeds of beef cattle. [By P Schweitzer.] 1894.
25. An inquiry into the composition of the flesh of cattle. [By P Schweitzer.] 1894.
26. Dairy management. [By A. M. Soule.] 1894.

27. Spraying apple trees for destruction of insects, and prevention of fungous diseases. [By Chas. Keffer.] 1894.
28. Feeding tests with different breeds of beef cattle. [By P. Schweitzer.] 1895.
29. Feeding wheat to pigs. [By P. Schweitzer.] 1895.
30. Spray calendar. [By E. G. Lodeman.] 1895.
31. Spraying orchards and vineyards. [J. C. Whitten.] 1895.
32. Field experiments with corn. [By H. J. Waters and C. M. Conner.] 1895.
33. Enquiry into the principles of potato growing and tests of varieties. [By P. Schweitzer.] 1896.
34. Manures and fertilizers. [By H. J. Waters.] 1896.
35. The Wooly-Aphis of the apple. [By J. M. Stedman.] 1896.
36. The lesser apple leaf folder. The leaf crumpler. [By J. M. Stedman.] 1896.
37. Texas fever. [By John W. Connaway.] 1897.
38. Winter protection of the peach. Peach growing in Missouri. [By J. C. Whitten.] 1897.
39. Influence of width of tire on draft of wagons. [By H. J. Waters.] 1897.
40. Sugar Beet. [By H. J. Waters.] 1897.
41. San Jose scale in Missouri. [By J. M. Stedman.] 1898.
42. A new orchard pest: the fringed-wing apple-bud moth. [By J. M. Stedman.] 1898.
43. Winter forcing of asparagus in the open field. Asparagus culture for Missouri. [By J. C. Whitten.] 1898.
44. The fruit tree bark-beetle. The common apple tree and peach tree borers. [By J. M. Stedman.] 1898.
45. The sugar beet. [By H. J. Waters.] 1899.
46. Grapes: 1. The study of types and varieties. 2. The study of the pollination of cultivated grapes. 3. Methods pursued by practical growers. [By J. C. Whitten.] 1899.
47. The tarnished plant bug. [By J. M. Stedman.] 1899.
48. Texas fever. [By J. W. Connaway and M. Francis.] 1899.
49. Apple orchard. [By J. C. Whitten.] 1900.
50. Test of spray nozzles. [By N. O. Booth.] 1900.
51. The chinch bug. [by J. M. Stedman.] 1902.
52. Influence of height of wheel on the draft of farm wagons. [By T. I. Mairs.] 1901.
53. Breeding experiments with sheep: 1. Some factors influencing the weight of lambs at birth. 2. Milk and food records of ewes. [By Frederick B. Mumford.] 1901.

54. The strawberry false-worm. The strawberry leaf-roller. [By J. M. Stedman.] 1901.
55. Pruning peach trees. [By J. C. Whitten.] 1902.
56. Dairy husbandry. [By C. H. Eckles.] 1902.
57. Raising calves with skim milk. [By C. H. Eckles.] 1902.
58. Feeding the dairy cow. [By C. H. Eckles.] 1902.
59. Corn improvement for Missouri. [By Geo. M. Tucker.] 1902.
60. A new Bordeaux powder. [By R. M. Bird.] 1903.
61. Apple growing in Missouri. [By J. C. Whitten.] 1903.
62. Hessian fly in Missouri. [By J. M. Stedman.] 1903.
63. Commercial fertilizers. [By F. B. Mumford.] 1904.
64. The "sting" in the apple. [By J. M. Stedman.] 1904.
65. Grain rations for dry lot hog feeding. By E. B. Forbes. 1905.
66. Analyses of commercial fertilizers. By P. Schweitzer and R. M. Bird. 1904.
67. Supplements to corn for fattening hogs. [By E. B. Forbes.] 1905.
68. Department of dairy husbandry. [By C. H. Eckles.] 1905.
    1. A test of tin can separators.
    2. A test of a fly repellant.
69. Three fungous diseases of the cultivated ginseng. [By Howard S. Reed.] 1905.
70. Analyses of commercial fertilizers. By P. Schweitzer and R. M. Bird. 1905.
71. Fruit tree leaf-roller. ([By J. M. Stedman.] 1906.
72. Alfalfa growing in Missouri. [By M. F. Miller.] 1906.
73. Cowpeas. [By A. E. Grantham.] 1906.
74. Winter killing of peach buds as influenced by previous treatment. (By W. H. Chandler.] 1907.
75. Wintering yearling cattle. [By H. J. Waters.] 1907.
76. Fattening cattle for the market. [By H. J. Waters.] 1907.
77. Inspection of commercial fertilizers. [By H. J. Waters.] 1907.
78. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.
79. Green forage for hogs. [By H. J. Waters.] 1908.
80. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.
81. Specific effects of rations on the development of swine. [By P. Schweitzer.] 1909.
82. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.

CIRCULARS OF INFORMATION.

1. Chinch bugs and their extermination. 1895.
2. Chinch bug infection. 1895.
3. San Jose scale in Missouri. 1896.
4. Peach yellows and peach rosette. 1897.
5. Sugar beet. 1897.
6. Clover and cow peas. 1898.
7. The Wooly-Aphis of the apple. 1898.
8. Agricultural experiment station. Third biennial report of the Director, on the enforcement of Fertilizer Control law. 1898.
9. Agricultural experiment station. Practical value of the work of the experiment station. 1899.
10. Agricultural experiment station. Spray calendar. 1902.
11. Corn as a stock food. 1902.
12. Factors in beef production. 1902.
13. Plant propagation. 1902.
14. Commercial fruit evaporators. 1902.
15. The principles of plant propagation: The Seed. 1903.
16. Fifth biennial report of the Missouri Agricultural experiment station on the enforcement of the Fertilizer Control law. 1903.
17. On the plantng and care of trees for the street and lawn. 1904.
18. The farmers' creamery in Missouri: When and how to build. 1905.
19. Suggestions for Missouri corn growers. 1905.
20. Directions for making Bordeaux powder. 1905.
21. Some fungous diseases and their treatment. 1905.
22. Feeding the orchard. 1905.
23. Fungicides, insecticides and spray calendar. 1906.
24. Beef production on high priced land. 1908.
25. Rational sheep feeding. 1908.
26. Feeding the dairy cow. 1908.
27. Feeding and care of horses. 1908.
28. Swine feeding. 1908.
29. Immunization of swine against hog cholera. 1908.
30. Missouri Housekeepers' Conference association. 1908.
31. Hardiness of peach buds, blossoms and young fruit as influenced by the care of the orchard. 1908.
32. Missouri apple growing. 1908.
33. Hotbeds and coldframes. Their preparation and management. 1908.
34. Instructions for spraying. 1908.
35. Protecting orchards against frosts and freezes. 1909.

36. Co-operative experiments of the department of agronomy. 1910.
37. Variations in cream tests. 1910.
38. The principles of maintaining soil fertility. 1910.
39. The seeding of cow peas. 1910.
40. The seeding of alfalfa. 1910.
41. Directions for testing milk on the farm. 1910.
42. The seeding of clovers and grasses. 1910.
43. Wheat growing in Missouri. 1910.
44. Feeding for milk production. 1910.
45. Selecting and judging corn. 1910.

REPORTS OF THE DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION.

No reports were published from 1889 to 1895 and from 1904 to 1909. Beginning with 1910, the annual report has been published as a bulletin and will be so indexed. The report for 1910 is bulletin 96. Only those papers contained in the reports, which were not published in the bulletins, are indexed as being in the reports. In the index the reports are indicated by R with the date as R 1898.

1888. First annual report of Missouri agricultural experiment station. 1888.

1896. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1896. Columbia, Missouri. December, 1896. Burckhartt & Rice, Printers, Columbia, Missouri.

1897. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1897. Columbia, Missouri. December, 1897. E. W. Stephens, Columbia, Missouri.

Contents:

Report of the director VI
Manures and fertilizers, by H. J. Waters..... 1
Wooly-Aphis of the apple, by J. M. Stedman..... 36
Lesser apple leaf folder, by J. M. Stedman..... 62
Texas fever, by John W. Connoway..... 81
Winter protection of the peach, by J. C. Whitten. 140
Influence of width of tire on draft of wagons, by H. J. Waters 165

1898. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station.

Annual report. 1898. Columbia, Missouri. December, 1898. E. W. Stephens, Printer, Columbia, Missouri.

Contents:

Report of the director VI
Sugar beet, by H. J. Waters..... 1
Fringed-wing apple bud moth, by J. M. Stedman.. 36
Winter forcing of asparagus in the open field, by J. C. Whitten 54
Third biennial report on the enforcement of the fertilizer control law, by H. J. Waters..... 70
Sunday chemical studies, by P. Schweitzer..... 77
Amount of food consumed by a cow producing a large quantity of milk and butter, by W. B. Cody 113
Preliminary ecological study of plants of Columbia, by F. P. Daniels..... 125

1899. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1899. Columbia, Missouri. December, 1899. Press of E. W. Stephens, Columbia, Missouri.

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INDEX.

Bulletins of the College.....1-35, 1883-1888
Bulletins of the Station.....1-82, 1888-1904
Circulars of the Station.....1-45, 1895-1903
Reports of the Director..... 1888-1903

The numbers of the bulletins are printed in **black face type.** The farm bulletins are preceded by the letter "A". The reports are indicated by the letter "R", followed by the year covered by the report. The circulars are indicated by a "C" prefixed to the circular number.

Acclimation fever, see Texas fever
Agricultural experiment stations, Law **1**: 5-9
Alfalfa **2**: 15; **72**; A **17**; C **38**; C **40**
Alfalfa as feed **72**: 6
Alfalfa as a pasture **72**: 8
Animals, see also cattle, sheep, swine, etc.
    Digestion, test **65**: 35-40
    Flesh **25**: 3-103
Apple-bud moth **42**: 3; C **7**
Apples
    Analysis **10**: 3
    Condition of soil **61**: 5-9
    Cultivation **61**: 22; C **32**
    Diseases **61**: 23; **35**; **36**; **42**; **44**; **64**; C **7**; C **21**; C **32**
    Root plant louse, see Wooly-aphis.
    Scab **27**: 3-23; **31**: 3, 6, 14; C **21**.
    Spraying **13**: 6; **27**:3-24; **31**; C **34**
    Tests **6**: 6-10
    Varieties **6**: 7; A **26**
Apple growing in Missouri **61**: C **32**
Apple orchards **49**; C **32**
Apple tree borers **44**: 12-21
Apple trees **61**: 12-21; R **1898**: 77
Ash analysis R **1898**: 77
Asparagus **43**:3 -17; C **21**
Australian cattle fever **37**: 60
Babcock test **26**: 32
Baby beef **76**: 29
Bag worms **31**: **18**
Barley **20**: 12-16
Basket worms, see Bag worms.
Bean rust C **21**
Beef cuts **24**: 76
Beef production **76**: A **27**; C **12**; C **24**
Beetles **44**: 3-12
Beets and beet sugar **7**: 17; **40**; **45**; C **5**; C **21**

Ben Davis apples **10**: 3
Blackberries **10**: 9; **13**: 12; A **20**; A **26**; C **21**
Black leg **12**: 2-15; A **24**
Bitter rot **31**: 3, 6
Black knot C **21**
Black rot **13**: 7; **31**:8, 16; C **21**
Block tests **24**: 77-84; **28**: 30
Blue grass **2**: 4
Bordeaux powder **10**: 5; **23**: 25; **27**: 5; **60**: 3-13; C **20**; C **34**
Brown rot **31**: 8; C **21**
Buckwheat **20**: 18
Buds **16**: 3
Butchers' cuts **24**: 77-84
Butchers' tests **24**: 77-84
Calves **56**: 13; **57**: 3-18; A **27**
Carnation rust C **21**
Cattle **24**; **25**; **28**; **75**; **76**; A **1**
    Beef cattle **24**: 3-88; **28**: 3-45; **76**; A **14**; A **19**; C **24**
    Breeds of beef cattle **24**: 3; A **27**
    Demands of market **76**: 42
    Fattening for the market **76**; A **1**; A **8**; A **27**; C **12**; C **24**
    Feeding and feed stuffs **24**: 19; **75**: 3, 11-34; **76**: 4-35; A **27**; C **11**; C **24**
    Feeding tests **28**: 3-37
    Flesh composition **25**: 3-103
    Physiological tests **24**: 85
    Profit **76**: 81
Celery C **21**
Charbon leg **12**: 10
Cheese **56**: 20
Chemical studies R **1898**: 77
Cherries A **26**
Chinch bug **51**:3-28; C **1**; C **2**
Chrysanthemum rust C **21**
Churns **26**: 36
Climate **5**: 14; **16**:11; **31**: 9
Clover **2**: 14-16; **76**: 29; C **6**; C **38**; C **41**
Codling moth **13**: 6; **31**: 12
Cold frames C **33**
Commercial fertilizers see Fertilizers, Commercial
Contagious diseases A **24**
Cooking C **30**

Co-operative experiments with farmers C **36**
Corn **9**: 3-28; **5**: 16, 23-34; **59**: 3; A **1**; A **7**; A **25**; C **11**
    Effect of drainage **32**: 27
    Fertilizers **32**: 3, 13-17; C **38**
    Field experiments **32**: 2-32; **14**: 3; A **7**
    Fodder **7**: 8; **8**: 3; A **11**
    Judging C **14**; C **45**
    Life history **9**: 3-78
    Manures used **14**: 9-11; **32**: 13
    Rate of seeding **32**: 23-27
    Seed corn C **19**
    Varieties **14**: 4; **32**: 3, 7-12; A **3**; A **25**; C **36**
    Yields **14**: 6, 13-36; **37**: 8-11
Corn as a hog food **65**: 30
Corn as a stock food C **11**
Corn harvesting A **21**
Corn improvements for Missouri **59**; C **19**
Corn meal **65**: 62; A **8**
Cows, **58**:3-22; R **1898**: 113; C **26**; C **44**; see also dairying
Cowpeas **73**; C **39**
    Cultivation of **73**: 34-46; C **6**
    Use of **73**: 11-34
    Value of, as a fertilizer **73**: 25-34; C **6**
Cream separators, see separators
Cream tests C **37**
Creameries **56**: 16; **57**: 42; C **18**
Crops A **29**
Crops in orchards **49**: 23
Cuts of beef **24**: 77-84
Dairy building, University of Missouri **56**: 6, 9; **57**: 39
Dairy cow **58**; R **1898**: 113
Dairy foods, analysis R **1898**: 111
Dairy husbandry **56**: 3-33
Dairying **26**: 3-40; **58**; C **18**; C **26**; C **37**; C **40**; C **44**
Dew A **6**; A **23**
Disinfection of pastures **37**: 55
Domestic science see Home economics
Draft of farm wagons **39**: 52
Drainage **32**: 27
Education in agriculture C **13**
Egyptian corn A **17**
Ensilage **7**:3; **8**: 3-21

Ben Davis apples **10**: 3
Blackberries **10**: 9; **13**: 12; A **20**; A **26**; C **21**
Black leg **12**: 2-15; A **24**
Bitter rot **31**: 3, 6
Black knot C **21**
Black rot **13**: 7; **31**:8, 16; C **21**
Block tests **24**: 77-84; **28**: 30
Blue grass **2**: 4
Bordeaux powder **10**: 5; **23**: 25; **27**: 5; **60**: 3-13; C **20**; C **34**
Brown rot **31**: 8; C **21**
Buckwheat **20**: 18
Buds **16**: 3
Butchers' cuts **24**: 77-84
Butchers' tests **24**: 77-84
Calves **56**: 13; **57**: 3-18; A **27**
Carnation rust C **21**
Cattle **24**; **25**; **28**; **75**; **76**; A **1**
    Beef cattle **24**: 3-88; **28**: 3-45; **76**; A **14**; A **19**; C **24**
    Breeds of beef cattle **24**: 3; A **27**
    Demands of market **76**: 42
    Fattening for the market **76**; A **1**; A **8**; A **27**; C **12**; C **24**
    Feeding and feed stuffs **24**: 19; **75**: 3, 11-34; **76**: 4-35; A **27**; C **11**; C **24**
    Feeding tests **28**: 3-37
    Flesh composition **25**: 3-103
    Physiological tests **24**: 85
    Profit **76**: 81
Celery C **21**
Charbon leg **12**: 10
Cheese **56**: 20
Chemical studies R **1898**: 77
Cherries A **26**
Chinch bug **51**:3-28; C **1**; C **2**
Chrysanthemum rust C **21**
Churns **26**: 36
Climate **5**: 14; **16**:11; **31**: 9
Clover **2**: 14-16; **76**: 29; C **6**; C **38**; C **41**
Codling moth **13**: 6; **31**: 12
Cold frames C **33**
Commercial fertilizers see Fertilizers, Commercial
Contagious diseases A **24**
Cooking C **30**

Co-operative experiments with farmers C **36**
Corn **9**: 3-28; **5**: 16, 23-34; **59**: 3; A **1**; A **7**; A **25**; C **11**
Effect of drainage **32**: 27
Fertilizers **32**: 3, 13-17; C **38**
Field experiments **32**: 2-32; **14**: 3; A **7**
Fodder **7**: 8; **8**: 3; A **11**
Judging C **14**; C **45**
Life history **9**: 3-78
Manures used **14**: 9-11; **32**: 13
Rate of seeding **32**: 23-27
Seed corn C **19**
Varieties **14**: 4; **32**: 3, 7-12; A **3**; A **25**; C **36**
Yields **14**: 6, 13-36; **37**: 8-11
Corn as a hog food **65**: 30
Corn as a stock food C **11**
Corn harvesting A **21**
Corn improvements for Missouri **59**; C **19**
Corn meal **65**: 62; A **8**
Cows, **58**:3-22; R **1898**: 113; C **26**; C **44**; see also dairying
Cowpeas **73**; C **39**
Cultivation of **73**: 34-46; C **6**
Use of **73**: 11-34
Value of, as a fertilizer **73**: 25-34; C **6**
Cream separators, see separators
Cream tests C **37**
Creameries **56**: 16; **57**: 42; C **18**
Crops A **29**
Crops in orchards **49**: 23
Cuts of beef **24**: 77-84
Dairy building, University of Missouri **56**: 6, 9; **57**: 39
Dairy cow **58**; R **1898**: 113
Dairy foods, analysis R **1898**: 111
Dairy husbandry **56**: 3-33
Dairying **26**: 3-40; **58**; C **18**; C **26**; C **37**; C **40**; C **44**
Dew A **6**; A **23**
Disinfection of pastures **37**: 55
Domestic science see Home economics
Draft of farm wagons **39**: 52
Drainage **32**: 27
Education in agriculture C **13**
Egyptian corn A **17**
Ensilage **7**:3; **8**: 3-21

Evaporators C **14**
Evergreen—diseases and pests **29**: 3
Excrements R **1898**; 86
Experiments, Cooperative C **36**
Farm machinery **4**: 2-24; A **32**
Farming A **34**; C **38**
Feces R **1898**: 101
Feeding and feed stuffs **24**: 19-43; **26**: 8, 26-28; **58**; 3-22; **65**; **75**: 3, 11-34; **67**; **76**: 4, 35; **79**; A **1**; A **2**; A **14**; A **19**; A **27**; A **28**; R **1898**: 101; C **24**; C **25**; C **26**; C **27**
Comparison of food values **79**.
Feeding for flesh A **27**
Feeding for lean meat A **14**; A **19**
Fertilization A **30**; C **38**
Fertilizers and manures **5**: 19-22; **14**: 9; **19**: 19-30; **20**: 4-32; **32**: 13; **34**:1-33; A **30**; C **6**; C **22**; C **38**
Chemical composition **63**: 16
Commercial **63**; **66**; **70**; **77**; **78**; **80**; **82**; C **38**
Economic value **34**: 20-25
Fertilizer control law **34**: 1-9; R **1898**; C **8**; C **16**
Green manuring **19**: 28; **20**: 27; **24**: 26; C **6**
Mineral fertilizers **5**: 20
Missouri law, **63**: 5-8
Fibre in feeding stuffs R **1898**: 105
Field trials with corn **5**: 16-44
Fire blight see Pea blight
Flora of Columbia, Missouri R **1898**: 124
Fly repellant **68**: 15-39
Fodder **7**: 3-17; **8**: 1-31; A **1**: 8; A **11**
Fringed wing apple bud moth **42**: 3-20
Frost protection to peach trees **16**: 3-8
Fruit diseases and pests **30**: 1; **31**: 20; **42**; **44**; **47**
Fruit evaporators C **14**
Fruit tree bark beetle **44**:3-12
Fruit tree leaf roller **71**
Fruits on horticultural grounds 1890 **10**: 14; A **26**
Fungicides C **23**; C **34**
Fungous diseases C **21**
Ginseng **69**: 3-25
Glanders **3**: 18; A **16**; A **33**
Grain rations **65**
Grape rot **10**: 15; **13**: 7; C **21**

Grapes **23**: 4-28; **31**; **46**: 3-46; A **20**; A **26**; C **21**
American, origin of **46**: 57
Pollination **46**: 55
Pruning **23**: 10
Sacking **23**: 26; **46**: 53
Types and varieties **23**: 3; **46**: 3-23
Grasses for meadows **2**: 10-16; C **38**; C **42**
Grasses for pastures **2**: 2-10; A **17**; C **42**
Handicrafts C **30**
Harrows **4**: 2-23
Hatch bill **1**: 9-12
Hay stacks , shrinkage A **25**
Hessian fly in Missouri **62**: 3-21
Hog cholera A **24**; C **29**
Hogs, see Swine
Home, American C **30**
Home economics C **30**
Home sanitation C **30**
Horses C 27
Horticulture C 13
Hot beds C **33**
Implements, see Farm machinery
Inoculation for Texas fever **11**: 20-34
Insects **13**: 6; **22**: 26; **23**; **27**: 3-24; **30**: 1; **31**: 20; **64**; C **23**
Insecticides C **23**; C **34**
Jerseys **26**: 6; **56**: 17
Johnson grass A **17**
Leaf anthracnose **69**: 8
Leaf crumpler **36**: 14-21
Leaf folder **36**: 3-13
Leaf roller **71**: 3-21
Leaf spot C **21**
Liming for alfalfa **72**: 31
Linseed oil meal **65**: 50
Live stock farming C **38**
McIntire orchard **27**: 15; **31**: 14
Mad itch A **33**
Manures, see Fertilizers and manures
Meadows **2**: 10-16
Meats **25**: 3-103
Milk **57**; R **1898**: 113; C **40**, see also dairying
Millet, analysis R **1898**: 84

Missouri agricultural experiment station **1**: 6; C **9**
Climatic conditions **5**: **14**
Organization **1**: 12-14
Soil **5**: 4-14
Missouri. University. College of agriculture
Apple exhibit at Nevada **6**: 9
Fruits on horticultural grounds **10**: 14
Missouri corn growers C **19**
Missouri grape growers **46**: 37
Missouri housekeepers' conference ass'n. 1908 C **30**
Model kitchen C **30**
Moths **42**: 3
Mulberries A **26**
Mulching A **4**
Nitrogen A **1898**; **87**; C **38**
Oats **20**: 8, 9, 17, 20-23; **65**: 61; C **38**
Oats varieties 1889, 1891, **15**: 9
Orange rust **31**: 9; C **21**
Orchard heaters C **35**
Orchards **27**; **31**; **42**; **49**; A **26**; C **22**; C **31**; C **34**; C **35**
Palatability of foods **65**: 35
Pastures **1**: 1-16; **37**: 55
Pea weavil **6**: 6
Peach buds **84**; C **31**
Peaches **38**: 3-27; **55**
Cultivation and management **38**: 22-27; C **31**
Diseases **41**; C **4**; C **21**
Pruning **74**
Winter protection **16**: 3; **38**: 3-27
Peach tree borer **44**: 12-21
Peach rosette C **4**
Peach yellows C **4**
Pear blight **16**: 8-10; C **21**
Pear scab C **21**
Peas **13**: 14; **20**: 6-7, 19, 20, 24
Pests **42**; **47**: 3; **51**; **64**; C **1**; C **2**
Phosphorus C **38**
Physiological tests see Cattle. Physiological tests
Pigs see Swine
Plant propagation C **13**; C **15**
Plantain, Analysis R **1898**; **83**

Plants **2**: 2-10; **16**: 17-21; C **13**; C **15**
Plants and their uses A **21**
Pleuro-pneumonia A **15**; A **24**
Plants of Columbia, Missouri, R **1898**: 124
Plows and plowing A **32**
Plum curculio **63**: 3-24
Plums A **26**
Potassium C **38**
Potatoes **10**: 10-13; **20**: 18; C **38**
    Mode of planting **33**: 4-17
    Seed potatoes A **12**
    Sub-soiling A **18**
    Tests **13**: 15-19; **16**: 17
    Variety tests **33**: 17-24
    Yields **33**: 9
Pruning
    Grapes **23**: 10-11
    Method **55**: 20
    Peach trees **55**: 3-31
Purslane R **1898**: 84
Rainfall at Columbia **13**: 5; **21**: 6
Raspberries **10**: 8; **13**: 11; A **20**; A **26**; C **21**
Rations, see Feeds and feed stuffs
Roads A **13**
Robnett orchard **27**: 14
Rotation of crops A **29**
Roughage see Feeds and feed stuffs
Rye **20**: 10, 11, 24
San Jose scale **41**: 3-21; C **3**
Seed **15**: 11-16; C **15**
    Germination experiments **6**: 4, C **15**
Seedling fruits **16**: 21; **22**: 3-11
Separators **26**: 31; **56**: 29; **57**: 43; **68**
Sheep **53**: 3-24; C **25**
    Ewes—milk yield **53**: 18-24
    Lambs—birth weight **53**: 3-18
Short horns **26**: 5
Silos **7**: 4-17; **58**: 13
    Cost of building **7**: 4-7
Skim milk **57**
    For calves **57**: 3-18
    For poultry **57**: 18

For pigs **57**: 21
Slaughtering **24**: 18
Small pox A **24**
Smudging C **35**
Soil fertility C **38**
Soils **19**: 3-19; **20**: 4-32; C **38**
Chemical composition **5**: 5-9; C **38**
Missouri Experiment station **5**: 4-14
Physical properties **5**: 10-14; A **5**; A **6**; A **23**
Soja bean A **17**
Southern cattle fever, see Texas fever
Sorghum A **17**
Spray calendar **30**; **31**: 20; C **10**; C **23**; C **34**
Spray nozzles **50**: 3-31
Spraying **3**: 2-19; **13**: 6; **30**; **31**: 20; C **34**
Apple trees **27**: 3-24; 31
Grapes **23**: 22-26; **31**
Stem anthracnose **69**: 6
Sting of apples **64**
Stock, see Cattle
Stover **75**: 22
Strawberries **13**: 8; **18**: 4-8; **22**: 3-11; **54**; A **20**; A **26**
Comparative tests **10**: 6
Diseases C **21**
Fruited **13**: 8; **16**: 13-16
Tests 1891 **16**: 12
Varieties **10**: 6; **16**: 13-16; **18**: 6
Strawberry false worm **54**: 6-16
Strawberry leaf roller **54**: 17-24
Subsoiling for corn **14**: 17; **32**: 20; A **5**; A **18**
Sugar beets see Beets and beet sugar
Swine **29**; **65**; **67**; **79**; **81**; A **1**; A **9**; A **10**
Effect of feed **81**
Feeding and feed stuffs **29**: 4-21; **65**; **67**; **79**; **81**; A **1**; A **9**; A **10**; A **28**; C **28**
Green forage and corn forage **79**; A **9**
Immunizing against hog cholera C **29**
Utilizer of wastes **76**: 73
Temperature of Columbia **16**: 11
Tarnished plant bug **47**: 3-13
Texas fever **11**: 3-60; **37**: 3-61; **48**: 3-66; A **24**; A **31**
Disinfecting pastures **37**: 55

Experiments **11**: 3-60
Germ of **11**: 35-45, 60
Immunizing northwestern cattle **48**
Immunity of southern cattle **11**: 52
Inoculation **11**: 20-26; **37**: 39; **48**: 5, 18
Tick infection **48**: 7
Tick theory **37**: 3
Tick fever, see Texas fever
Tillage for corn **14**: 35; A **5**; C **19**
Timothy **2**: 10; **58**: 12; **75**: 20
Tires **39**: 3-44; A **13**
Tomatoes **13**: 13; C **21**
Tools, see Farm machinery
Trees for street and lawn C **17**
Vaccination **12**: 12; A **24**
Vegetables A **20**; A **26**
Vetch A **15**
Veterinarian, Second report A **16**
Vinegar, Analysis R **1898**: 87
Vineyards, see Grapes
Wagons **39**: 3-44; **52**; A **13**
Influence of height of wheels on draft **52**: 1-23
Influence of width of tire on draft **39**: 3-44
Dirt roads **39**: 11; A **13**
Gravel roads **39**: 9
Macadam roads **39**: 9
Pastures **39**: **36**
Plowed ground **39**: 41
Wheat **20**: 15, 16; **21**: 3-16; **29**: 3-20; **34**: 9; A **7**; A **21**; C **38**; C **43**
Tests **15**: 3-18; **21**: 7; A **3**
Yields **21**: 9-10; **34**: 11
Wheat bran **65**: 61
Wheat middlings **65**: 60
Wilt disease **69**: 8
Wooly-aphis **35**: 3-21; C **7**
Characteristics **35**: 39
Remedies **35**: 50-61

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 15 NUMBER 2

LIBRARY SERIES 6

CHECK LIST OF THE OFFICIAL SERIAL PUBLICATIONS OF THE UNIVERSITY

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
January 9, 1914

PREFACE

The purpose of this bulletin is to record in permanent form the serial material published by the University of Missouri and to furnish a check list for those libraries and institutions which wish to complete their files of any one or all of the series. Neither the University library nor the library of the State historical society of Missouri has complete files of the publications listed in this bulletin. It is hoped that alumni and other citizens who have any of the publications in this list which they do not care to preserve will send them to the University library. If there is any one place where these publications should be found, it is in the stacks of the University of Missouri library.

There is a large amount of ephemeral material published by the University from year to year which does not reach the library. It will not be surprising, therefore, if the record in the following pages should not be absolutely correct. The compiler would consider it a favor if the reader would notify him of any errors in record or in omission.

On October 5, 1910, the Board of Curators created a committee on University publications for the purpose of systematizing, co-ordinating, and developing the several series of publications. The committee has classified the publications under three general heads:

A. University of Missouri studies.
B. University of Missouri bulletin.
C. Publications of the Agricultural experiment station.

For the purpose of bringing about a closer co-ordination of the different series, the committee adopted wherever practicable a uniform size, title-page, and typographical arrangement, and manuscripts and illustrations submitted for publication must henceforth conform to these standards, unless it should be considered necessary to make an exception in an individual case.

Unless otherwise stated, copies of the various publications in print may be secured by addressing the Librarian of the University.

HENRY ORMAL SEVERANCE.

January 1, 1914.

CONTENTS

Prefatory note 3

The University of Missouri studies 5

The University of Missouri bulletin 8

- General series 8
- Astronomical series 14
- Education series 16
- Engineering series 16
- Extension series 17
- Journalism series 18
- Law series 19
- Library series 19
- Medical series 20
- Rural education series 20
- Science series 20
- Social science series 21

College of agriculture and Agricultural experiment station publications 22

- Bulletins 22
- Circulars 28
- Reports 30
- Research bulletins 31

School of mines publications 34

Appendix—Miscellaneous publications 37

A. Publications issued currently 39
- Board of curators reports 39
- Board of visitors reports 39
- University catalogue 39
- Circular of information 40
- Announcements of the various schools such as engineering, law, medicine, etc 41
- Committee on statistics, etc 42

B. Publications suspended 42

THE UNIVERSITY OF MISSOURI STUDIES

Edited by George Lefevre

The Studies are devoted to the publication of extensive papers embodying the results of original research made by members of the faculty and by graduate students. No paper that has appeared elsewhere will be accepted for publication in the Studies.

After the publication of two volumes of miscellaneous papers, the Studies were differentiated into series, of which the following are now being issued: 1, Social science series; 2, Science series; 3, Literary and linguistic series; 4, Philosophy and education series; 5. Mathematics series. New series will be established, as papers which may not properly fall in any of the above groups are accepted for publication.

VOLUME 1

1. Contributions to a psychological theory of music, by Max Meyer, Ph. D., Professor of Experimental Psychology. vi, 80 p. 1901. 75 cents. Out of print.
2. Origin of the Covenant Vivien, by Raymond Weeks, Ph. D., Professor of Romance Languages. viii, 64 p. 1902. 75 cents. Out of print.
3. The evolution of the northern part of the lowlands of southeast Missouri, by C. F. Marbut, A. M., Professor of Geology. viii, 63 p. 1902. $1.25. Out of print.
4. Eileithyia, by Paul V. C. Baur, Ph. D., Acting Professor of Classical Archæology. vi, 90 p. 1902. $1.00.
5. The right of sanctuary in England, by Norman Maclaren Trenholme, Ph. D., Professor of History. viii, 106 p. 1903. 75 cents. Out of print.

VOLUME 2

1. Ithaca or Leucas? by William Gwathmey Manly, A. M., Professor of Greek Language and Literature. vi, 52 p. 1903. $1.00.
2. Public relief and private charity in England, by Charles A. Ellwood, Ph. D., Professor of Sociology. viii, 96 p. 1903. 75 cents. Out of print.

3. The process of inductive inference, by Frank Thilly, Ph. D., Professor of Philosophy. v, 40 p. 1904. 35 cents.
4. Regeneration of Crayfish Appendages, by Mary I. Steele, M. A. viii, 47 p. 1904. 75 cents. Out of print.
5. The spermatogenesis of Anax Junius, by Caroline McGill. viii, 15 p. 1904. 75 cents. Out of print.

MATHEMATICAL SERIES

VOLUME 1

1. On the definition of the sum of a divergent series, by Louis Lazarus Silverman, Ph. D. v, 96p. 1913. $1.00.

SCIENCE SERIES

VOLUME 1

1. Topography of the thorax and abdomen, by Peter Potter, M. A., M. D. vii, 142p. 1905. $1.75.
2. The flora of Columbia and vicinity, by Francis Potter Daniels, Ph. D. x, 319p. 1907. $1.25.

VOLUME 2

1. An introduction to the mechanics of the inner ear, by Max Meyer, Ph. D., Professor of Experimental Psychology. viii, 140p. 1907 $1.00.
2. The flora of Boulder, Colorado, and vicinity, by Francis Potter Daniels, Ph. D. viii, 453p. 1911. $1.50.

SOCIAL SCIENCE SERIES

VOLUME 1

The clothing industry in New York, by Jesse E. Pope, Ph. D., Professor of economics and finance. xviii, 340 p. 1905. $1.25.

VOLUME 2

1. The social function of religious belief, by William Wilson Elwang, Ph. D. viii, 100p. 1908. $1.00.
2. The origin and early development of the English universities to the close of the thirteenth century, by Earnest Vancourt Vaughn, A. M., Instructor in History. viii, 147p. 1908. $1.00.
3. The origin of the Werewolf superstition, by Caroline Taylor

Stewart, A. M., Ph. D., Assistant Professor of Germanic Languages. iv, 32p. 1909. 50 cents.

4. The transitional period, 1788-1789, in the government of the United States, by Frank Fletcher Stephens, Ph. M., Ph. D., Instructor in American History. viii, 126p. 1909. $1.00

LITERARY AND LINGUISTIC SERIES

VOLUME 1

Chevalerie Vivien, Facsimile phototypes, with an introduction and notes, by Raymond Weeks, Ph. D., formerly Professor of Romance Languages. 12p, plates 24. 1909. $1.25.

VOLUME 2

The cyclic relations of the Chanson de Willame, by Theodore Ely Hamilton, A. M., Ph. D. ix, 301p. 1911. $1.25.

PHILOSOPHY AND EDUCATION SERIES

VOLUME 1

1. The treatment of personality by Locke, Berkeley and Hume, by Jay William Hudson, Ph. D., Assistant Professor of Philosophy. xvi, 96p. 1911. 75 cents.

THE UNIVERSITY OF MISSOURI BULLETIN

From 1892 to 1900 there were various bulletins, circulars, and announcements published and distributed, but they were not numbered consecutively nor published regularly. One number of the bulletin is known to have been published August 25, 1893, and three to have been published in 1894, but such ephemeral material was not preserved. There undoubtedly were other bulletins. Beginning with volume 1, number 1, February, 1900, the bulletins have a consecutive number.

Bulletin, volumes 1 to 3, number 4, had the title, Bulletin of the University of the State of Missouri. In 1911 a new series of the bulletins was issued. The series which began with volume 1, 1900, was given the title, General series, 1911-1913, with a continuation of the volume number which the bulletin had before, the new series was begun. Those with a star (*) preceding the title are still available for distribution. Others are out of print. In addition to the series noted in this bulletin, a Social science series has been authorized, but no bulletins have been published thus far.

GENERAL SERIES

Published monthly

Edited by Hugh J. MacKay

The object of this series is to furnish information regarding the University and its several colleges and schools. It accordingly consists of the general catalogue and the individual announcements of the several divisions of the University.

VOLUME 1, 1900

1. February. Summer school, June 4 to August 25. 13p. il.
2. Announcement to teachers of work in progress in certain classes. 15 Mar-1 June, 1900. 7p.
3. June. Catalogue 1899-1900. 224p.
3. June. Circular of information. 4p.

*4. July. Department of medicine. 4p.

5. August. School of engineering. 4p.

*6. September. The growth of the University. 4p.

7. October. Short winter courses in agriculture and horticulture. 4p.
8. November. Short winter courses in agriculture and horticulture. 16p.

VOLUME 2, 1901

1. January. Circular of information. 4p.
2. February. Announcement to teachers of work in progress in certain classes, 15 March to 1 June, 1901. 8p.
3. March. Summer school, June 3 to August 24, 1901. 16p. il.
*4. April. Department of law. 4p.
*5. May. Catalogue 1900-1901. 268p.
*6. June. Department of medicine. 4p.
*7. July. Circular of information. 4p.
*8. August. Department of engineering. 4p.
*9. September. Agriculture, mechanic arts, household economics. 4p.
*10. October. Special winter courses in agriculture, horticulture and dairying. 4p. il.
*11. November. Results of a religious census of Columbia. 4p. (Called No. 10)
*12. December. Short winter courses in agriculture, horticulture and dairying. January 1, 1902, to March 22, 1902. 16p.

VOLUME 3, 1902

*1. January. Buildings, libraries, laboratories. 4p.
*2. February. Growth in eleven years, 1890-1901. 4p.
*3. March. Summer session for 1902, June 2 to August 30. 15p.
*4. April. Department of law. 4p.
*5. May. Announcement of the department of medicine, 1902-1903. 19p.
*6. June. Catalogue, 1901-1902. 244p.
*7. July. Circular of information. 4p.
*8. August. School of engineering. 4p.
*9. September. School of agriculture. 4p.
*10. October. Special winter courses in agriculture, animal husbandry, horticulture and dairying. 4p. il.
*11. November. Short winter courses in agriculture, horticulture, animal husbandry, and dairying. 18p. il.
*12. December. What the University has done for Missouri. 9p.

VOLUME 4, 1903

*1. January. The condition of the almshouses in Missouri. 6p.
*1. Supplement. The condition of the county jails in Missouri. 8p.
*2. February. Former students living in Missouri. 1st ed. 24p. 2d ed. (without title), 26p.
*3. March. Summer session for 1903. (June 1 to August 28). 16p.

*4. April. Department of law. 2 editions, one 4p., the other 4p. and 4p. il.
*5. May. Catalogue, 1902-1903. 242p.
*6. June. Department of medicine, 2 editions, one 4 p., the other 4p. and 8p. il.
*7. July. Circular of information, 2 editions, one 4p., the other 4p. and 16p. il.
*8. August. School of engineering, 2 editions, one 4p. the other 4p. and 8p. il.
*9. September. College of agriculture, 2 editions, one 4p., the other 4p. and 8p. il.
*10. October. College of agriculture. Short winter courses in agriculture, dairying, and animal husbandry. Courses begin January 5, 1904. 16p. il.
*11. November. Parker memorial hospital, 10p. il.
*12. December. Student homes. 12p. il.

VOLUME 5, 1904

*1. January. Former students living in Missouri. 28p.
*2. February. Academic department. Circular of information. 12p.
*3. March. Summer session for 1904 (June 2 to August 2). 16p.
*4. April. Department of law announcement, 1904-1905. 27p.
*5. May. Catalogue, 1903-1904. 292p.
*6. June. Department of medicine. 4p.
Incorrectly numbered v. 6, no. 6, afterwards enlarged and correctly numbered, 7p.
*7. July. Circular of information. 4p.
*8. August. School of engineering. 4p.
*9. September. College of agriculture. 4p.
*10. October. College of agriculture. Short winter courses: agriculture, dairying and animal husbandry. 19p.
*11. November. What the University has done for Missouri 16p
*12. December. Growth in thirteen years (1890-1903). 4p

VOLUME 6, 1905.

*1. January, 1905. The University of Missouri. 52p.
*2. February. Catalogue, 1904-1905. 345p.
*3. March. Summer session for 1905 (June 10 to August 10). 25p
*4. April. Department of law announcement, 1905-1906. 24p.
*5. May. Academic department. Circular of information. 1905-1906. 16p.
*6. June. Department of medicine, 1905-1906. 16p.
*6. June. Teachers' college,

*7. July. General announcement, 1905-6. 16p.
*8. August. School of engineering. Circular of information 1905-6. 26p.
*9. September. College of agriculture. Announcement 1905-6. 20p.
*10. October. College of agriculture. Short winter courses; agriculture, dairying and animal husbandry. 16p.
*11. November. Obligations and opportunities of the churches at the University of Missouri. 4p.
*12. December. Announcement of the second semester. January 30 to June 6, 1906. 4p.

VOLUME 7, 1906

*1. January. Purpose of the summer session. 4p.
*2. February. University of Missouri (views). 32p.
*3. March. Academic department. Teachers college 1906-1907. 36p.
*4. April. Department of law. Announcement 1906-7. 24p.
5. May. Catalogue 1905-6. 400p.
6. June. Department of medicine. Announcement 1906-7. 4p.
7. July. General announcement. 8 p. il.
8. August. School of engineering 1906-7. 14p.
9. September. College of Agriculture. 1906-7. 16p.
10. October. College of Agriculture. Short winter courses, agriculture, dairying and animal husbandry, 20p.
11. November. Announcement for second semester.
*12. December. Alumni directory. 105p.

VOLUME 8, 1907

*1. January. The success of the college graduate, by J. C. Jones. 16p.
2. February. Views of the University of Missouri. 32p.
*3. March. Announcement of the summer session for 1907. 29p.
4. April. Department of law announcement 1907-8. 24p.
*5. May. Catalogue 1906-7. 427p.
*6. June. Teachers College announcement 1907-8. 29p.
7. July. University of Missouri. General announcement. 8p. il.
8. August. Department of engineering. Circular of information 1907-8. 16p.
9. September. College of agriculture. Announcement 1907-8.
*10. October. Medical department. Announcement 1907-8. 30p. il.
*11. November. College of agriculture. Short winter courses, agriculture, dairying and animal husbandry. 23p.

*12. December. Announcements for second semester, January 29 to June 5, 1908.

VOLUME 9, 1908

*1. January. Missouri state military school announcement 1907-8. 16p.
*2. February. Announcement of summer session 1908. 30p.
*3. March. College of arts and science announcement 1908-9. 48p.
*4. April. Department of law announcement 1908-9. 24p.
*5. May. Catalogue 1907-8. 468p.
*6. June. Medical department announcement 1908-9. 27p. il.
*7. July. Views of the University of Missouri. 16p.
*8. August. Department of engineering circular of information 1908-9. 19p.
*9. September. Not published.
10. October. Practical instruction for young farmers, 16p.
11. November. Agriculture as a career (numbered vol. 8, No. 12, without date).
*12. December. Announcements for the second semester. 8p.

VOLUME 10, 1909

*1. January. Announcement of summer session 1909. 32p
*2. February. Teachers college announcement 1909-10. 4p.
3. March. Not published.
*4. April. School of law announcement 1909-10. 24p.
*5. May. Catalogue 1908-9. 512p.
*6. June. School of medicine announcement 1909-10. 24p.
*7. July. Announcement of the School of engineering 1909-10. 16p
*8. August. Education for agriculture. 24p. il.
*9. September. Short winter courses in agriculture 1909-10 24p.
*10. October. Rural education. The soil by R. H. Emberson. 8p.
*11. January. 1910, Rural education. The horse by R. H. Emberson. 8p.
*12. December, 1909, Second semester courses 1910. 18p.

VOLUME 11, 1910

*1. January. Announcement of the summer session 1910 32p.
*2. February. Announcement of the School of education 1910-11. 38p.
3. March. Not published.
*4. April. School of law announcement 1910-11. (Numbered as v. 10, No. 4). 24p.

*5. May. Catalogue 1909-10. 521p.
*6. June. School of medicine announcement 1910-11. 24p.
*7. July. Announcement of the School of journalism 1910-11. 15p.
*8. August. Education for agriculture. 24p.
9. September. Announcement of the School of engineering 1910-11. (Numbered as v. 10, No. 9). 20p.
*10. October. Short winter courses in agriculture. 23p. il.
*11. November. Second semester courses. 18p.
12. December. Not published.

VOLUME 12, 1911

*1. January. Announcement of the Summer session 1911. 40p.
*2. February. Announcement of the Graduate school 1911-12. 64p.
*3. March. Announcement of the School of education 1911-12. 27p.
*4. April. Announcement of the School of law. 24p.
*5. May. Catalogue 1910-11.
*6. June. Announcement of the School of medicine 1910-11. 22p.
*7. July. Announcement of the College of arts and science 1911-12. 40p.
*8. August. Announcement of the School of journalism 1911-12. 14p.
*9. September. Announcement of the School of engineering 1911-12. 27p.
*10. October. Announcement of the College of agriculture (regular session) 1911-12. 43p.
*11. November. Announcement of the two-year winter course College of agriculture 1911-12. 53p. il.
*12. December. Announcement of second semester courses 1911-12. 23p.

VOLUME 13, 1912

*1. January. Announcement of the Summer session 1912. 48p. il.
*2. February. "Every day at the University" (A glimpse of student activities with views of the buildings). 48p.
*3. March. Announcement of the Graduate school 1912-13. 62p.
*4. April. Catalogue 1911-12. 526p.
*5. May. Announcement of the School of education 1912-13. 32p. il.
*6. June. Announcement of the School of medicine 1912-13. 41p.
*7. July. Announcement of the School of law 1912-13. 17p.
*8. August. Announcement of the School of journalism 1912-13. 18p.
9. September. Not published.
*10. October. Announcement of the College of agriculture (regular session) 1912-13. 55p.

*11. November. Announcement of the two year winter and short courses, College of agriculture 1912-13. 51p.
*12. December. Announcement of the Second semester courses 1912-13. 20p.

VOLUME 14, 1913

*1. January. Announcement of the Summer session 1913. 46p. il.
*2. February. Announcement of the College of arts and science 1913-14. 33p.
*3. March. Announcement of the Graduate school 1913-14. 61p.
*4. April. Announcement of the School of education 1913-14. 31p.
*5. May. Catalogue 1912-13. 488p.
*6. June. Announcement of the School of medicine 1913-14. 32p.
*7. July. Announcement of the School of law 1913-14. 34p.
*8. August. Announcement of the School of journalism 1913-14. 14p.
*9. September. Announcement of the School of engineering 1913-14. 44p. il.
*10. October. Announcement of the College of agriculture (regular session 1913-14. 58p. il.
*11. November. Announcement of the two year winter course and other short courses, College of Agriculture, 1913-14. 42p. il.
*12. December. Announcement of the second semester courses 1913-14. 22p.

ASTRONOMICAL SERIES

(Laws observatory bulletin)

Published irregularly.

Edited by Robert Horace Baker.

This bulletin is devoted exclusively to the publications of astronomical researches conducted in the Laws observatory. Numbers one to sixteen were edited by Frederick Hanley Seares under the title, Laws Observatory. Bulletin 1902-1908. It was then placed in the astronomical series of the University bulletin.

Copies may be obtained from the Librarian, except numbers 1-9, which are out of print.

VOLUME 1

1. Observations and elements of comet b 1902 (Perrine).
2. Observations of comets.
3. Observations of comet a 1904 (Brooks).

4. Observations of comet e 1904 (Borrelly).
   Photometric observations of Nova Geminorum ch. 2387.
   Special time signals from the U. S. naval observatory.
5. The polaris vertical circle method of determining time and azimuth introduction.
6. The algol variable 188. 1904 Draconis.
7. Photometric investigations.
   The disc photometer.
   The wedge photometer.
   Investigation of the wedges.
8. A grant from the Gould fund.
   General remarks concerning variable star observations.
   A new variable, 88.1906 Lacertae.
   Preliminary results for V Lacertae, 110.1904.
   The variable V Vulpeculae, 4.1904.
   Preliminary note on variable 108.1905 Capricorni.
9. The Algol variable RR Draconis (188.1904).
   Preliminary announcement concerning the Algol variable 121.1906 Draconis.
10. Announcement of preliminary results for variable stars.
    (1) General remarks and star list.
    (2) Preliminary results.
11. The variable RS Cassiopeiae (108.1904).
12. Finding ephemerides for comet 1894 IV (E. Swift).
13. The Zöllner-Müller photometer.
    The Gans-Crawford telescope.
    The variable X Lacertae (88.1906).
    The variable V Lacertae (110.1904).
14. The variable RV Tauri (45.1905).
15. The Algol variable RW Monocerotis (24.1907).
    Preliminary announcements concerning variable stars.
16. The long-period Algol variable RZ Ophiuchi (103.1905).
    Preliminary announcement concerning SW Andromedae (5.1907)

VOLUME 2

17. The antalogol variable St. Ophiuchi (52.1907).
18. The Algol variable Rx Draconis (121.1906).
19. The Algol variable Rz Draconis (26.1907).
20. Studies with the polarizing photometer.
21. The rotating ellipsoid Ru Camelopardalis.

EDUCATION SERIES

Published irregularly

Edited by Jesse H. Coursault

The object of the Education series is the publication of new formulations of educational principles and data of direct value to the schools of the state, and of educational researches which have significance for other schools of education.

Copies of these bulletins may be obtained from the editor.

VOLUME 1

1. June, 1911. Circular of information to accredited schools. Fifth edition revised. 123p.
2. November, 1911. Rural school consolidation in Missouri, by O. L. Kunkel and W. W. Charters. 36p.
3. February, 1912. Journalism for teachers, by Frank L. Martin. 27p.
4. December, 1912. Geography of Missouri, by Frederick Emerson. 74p.
5. The teaching of poetry in the high school, by A. H. R. Fairchild (in preparation).
6. January, 1913. An experimental study of methods of teaching high school German, by Mamie M. Clarahan. 32p.

VOLUME 2

1. October, 1913. Circular of information to accredited schools. Sixth edition, revised. 139p.

ENGINEERING EXPERIMENT STATION SERIES

Published quarterly

"This series is the official publication of the Engineering experiment station of the University, which was established by the Board of Curators on July 1, 1909, for the investigation of such problems in engineering as appear to be of the most direct and immediate value to the people of the state and for researches of importance to manufacturing and industrial interests and to engineers."

Some experiments in the storage of coal by E. A. Fessenden and J. R. Wharton. (Published in 1908, previous to the establishment of the Experiment station.)

Copies of these bulletins may be obtained from the Dean of School of engineering.

VOLUME 1, 1910

1. March. Acetylene for lighting country homes by J. D. Bowles. 34p.
2. June. Water supply for country homes by K. A. McVey. 35-54p.
3. September. Sanitation and sewage disposal for country homes by W. C. Davidson. 55-72p.
4. Not published.

VOLUME 2, 1911

1. March. Heating value and proximate analysis of Missouri coals by C. W. Marx and Paul Schweitzer. (Reprint of report published previous to establishment of Experiment station). 16p.
2. June. Friction and lubrication testing apparatus by Alan E. Flowers. 20p.
3. September. An investigation of the road making properties of Missouri stone and gravel by W. S. Williams and R. Warren Roberts. 70p.
4. Not published.

VOLUME 3, 1912

1. March. The use of metal conductors to protect buildings from lightning by E. W. Kellogg. 55p.
2. June. Firing tests of Missouri coal by H. N. Sharp. 44p.
3. September. Report of steam boiler trials under operating conditions by A. L. Wescott. 21p.
4. Not published.

VOLUME 4, 1913

1. March. Economics of rural distribution of electric power by L. E. Hildebrand. 50p.
2. June. Comparative tests of cylinder oils by M. P. Weinbach. 28p.
3. Artesian waters in Missouri by A. W. McCoy. 73p.
4. Friction tests of lubricating greases and oils by A. L. Westcott.

EXTENSION SERIES

Published irregularly

Edited by Charles H. Williams

This series of bulletins is the official publication of the Extension division of the University, object of which is to "serve citizens

of the commonwealth who are unable to attend established institutions; to guide them in the pursuit of a more effective education; to give every person in the state an opportunity to get the most complete education possible at the lowest practicable cost; to make the University the center of every movement which concerns the interests of the state; and to bring the University and the home in close touch."

Copies of these bulletins may be obtained from the editor.

VOLUME 1

Announcement of the Extension division 1912-13. November, 1912.

1. April, 1913. A new departure for University extension. 4p.
2. July, 1913. School improvement agencies. Suggestions for superintendents and principals by W. W. Charters. 15p.
3. October, 1913. Consolidation of schools of Missouri by R. H. Emberson. 20p.
4. November, 1913. Correspondence courses in high school subjects. 8p.
5. December, 1913. Announcement of the Extension division.

JOURNALISM SERIES

Published quarterly

Edited by Charles Griffith Ross

This series of bulletins discusses problems of the newspaper office. Both the editorial and business departments are considered.

Copies of these bulletins may be obtained from the Dean of the School of journalism.

VOLUME 1.

1. April, 1912. Missouri laws affecting newspapers compiled by Walter Williams. 66p.
2. May, 1912. Journalism week in print. 64p.
3. July, 1912. Retail advertising and the newspaper by Joseph E. Chasnoff. 47p.
4. March, 1913. The news in the country paper by Charles G. Ross. 44p.

VOLUME 2

1. May, 1913. Journalism week, 1913. 63p.

LAW SERIES

Published irregularly

Edited by Charles K. Burdick

"The purpose of the Law series of the bulletin will be to offer to the lawyers of Missouri articles dealing with Missouri law or with questions of federal law which have arisen or are likely to arise in Missouri, as well as short notes on recent Missouri decisions."

Copies may be obtained from the editor.

1. November, 1913. Estates tail in Missouri by Manley O. Hudson. Notes on recent Missouri cases by the student editors. 47p.

LIBRARY SERIES

Published irregularly

Edited by Henry Ormal Severance

The purpose of this bulletin is to furnish a medium for the publication of bibliographical researches, papers on library science, and such other material pertaining to library work as may be of interest to the people of Missouri and to libraries and institutions of the state.

Copies may be obtained from the editor.

VOLUME 1

1. 1908. Annual report of the librarian 1907. Appendix contains list of scientific serials in the libraries of the University. 60p.
2. August, 1910. List of periodicals currently received by the libraries. 20p.
3. September, 1910. Handbook of the libraries. 42p.
4. April, 1912. Books for farmers and farmers' wives. 24p.

VOLUME 2.

1. July, 1912. Partial bibliography and index of the publications of the College of Agriculture and the Agricultural experiment station. 19p.
2. January, 1914. Check list of the official serial publications of the University.

MEDICAL SERIES

Published irregularly

Edited by D. H. Dolley

"This series will be issued quarterly and is devoted primarily to topics within the general field of hygiene and preventive medicine. These bulletins will be illustrated and popular in character and as thorough and practical as possible."

Copies may be obtained from the Department of preventive medicine.

VOLUME 1, 1913

1. January. Bacteria and disease, by O. W. H. Mitchell. 39p.
2. April. Prevention of typhoid fever, by W. J. Calvert. 38p.
3. July. Prevention of contagious diseases in school children, by W. J. Calvert. 31p.
4. On Resuscitation, by D. H. Dolley. 29p.

RURAL EDUCATION SERIES

Edited by Richard Huff Emberson

VOLUME 1

1. August, 1909. Ten lessons on the study of Indian corn, prepared by M. F. Miller and arranged by R. H. Emberson. (Not numbered).
2. October, 1909. The soil. Prepared by R. H. Emberson. (Numbered v. 10, No. 10. General series).
3. January, 1910. The horse. Prepared by R. H. Emberson. (Numbered v. 10, No. 11. General series).
4. February, 1911. A study of cattle. (Numbered v. 12, No. 4. Rural education series).
   (Continued in the Extension series of the University of Missouri bulletins).

SCIENCE SERIES

Published irregularly

Edited by George Lefevre

The science series of the bulletin is devoted to the publication of short original papers, preliminary announcements of results of research, and of articles of a general or popular character which are

of sufficient interest and importance to warrant their publication.

Copies may be obtained from the Librarian.

VOLUME 1

Non-technical lectures on the sciences, by members of the faculty of the University of Missouri:

1. The unity of science by Arthur O. Lovejoy, formerly professor of philosophy. 34p. 1912. 30 cents.
2. Mathematics, by Earle R. Hedrick, professor of mathematics. 19p. 1912. 25 cents.
3. Physics, by Oscar Milton Stewart, professor of physics. 22p. 1912. 25 cents.
4. Chemistry, by William George Brown, professor of industrial chemistry. 26p. 1912. 25 cents.
5. Astronomy, by Herbert Meredith Reese, assistant professor of physics. 17p. 1913. 25 cents.
6. Geology, by Curtis Fletcher Marbut. 1913.
7. Botany, by C. Stuart Gager. 1913.
8. Experimental zoology, by Winterton Conway Curtis (in preparation).
9. Evolutional zoology, by George Lefevre (in preparation).

VOLUME 2

1. The implantation of the glochidium on the fish, by Daisy Young, assistant in zoology 22p, plates 3. 1911. 50 cents.
2. Notes on the Ohio shales and their faunas, by E. B. Branson, professor of geology. 16p. plates 3. 1911. 50 cents.
3. The blonde race and the Aryan culture, by Thorstein B. Veblen. 19p. 1913. 25 cents.

SOCIAL SCIENCE SERIES

Published irregularly.

Edited by Norman Maclaren Trenholme.

The social science series of the bulletin aims to provide for the publication of brief studies or accounts of political, social, economic or historical character which will be of interest and value to the people of the state.

(In preparation).

THE PUBLICATIONS OF THE COLLEGE OF AGRICULTURE AND OF THE AGRICULTURAL EXPERIMENT STATION.

Edited by Arthur J. Meyer.

The Agricultural experiment station issues the following three series of publications: 1, Research bulletins; 2, Bulletins; 3, Circulars of information.

Research bulletins—The results of fundamental research are published in small editions and distributed among investigators and public libraries. These bulletins, five of which have already been issued, are not intended for distribution among farmers.

Bulletins—These bulletins are intended to include the results of original research, but differ from the Research bulletins in that the results are primarily of interest to farmers. All of the larger editions of the bulletins are widely distributed among the farmers of the state. Bulletins of this series are also sent to libraries and investigators at other agricultural experiment stations. One hundred and fifteen numbers have been published.

Circulars of information—These publications do not necessarily include the results of original investigation carried on by the Experiment station, but are intended to be a means of distributing to the farmers of the state valuable information on important agricultural subjects. Sixty-six circulars have already been issued.

All publications of the Experiment station available for distribution are starred.

Address Director of the Agricultural experiment station for copies.

MISSOURI STATE AGRICULTURAL COLLEGE FARM BULLETINS

(These bulletins are out of print.)

There were twenty bulletins issued under the title, "Missouri state agricultural college farm bulletins." Numbers 1—8 were published in the "Annual catalogue of the Missouri University at Columbia, Missouri, 1883-1884." Numbers 9—14 were published in the catalogue for 1884-1885; and numbers 15—19 in the catalogue for 1885-1886. The following bulletins were issued in separate pamphlet form: Nos. 1—8, 10—12, 14, 16, 18—21, 23—25, 29—34. Number 21 was issued only in pamphlet.

Bulletins 21—35 were issued under the title: "Missouri state agricultural college bulletin": numbers 19—20, and 22—27 were pub-

lished in the annual report of the State board of agriculture for 1886-1887; numbers 28—30 in the report for 1887-1888; and 31—35 in the report for 1888-1889. Numbers 9—12, 14, 21, and 28—33 were also issued separately. Bulletin 35 is also bulletin number 2 of the Agricultural experiment station. Numbers 15, 16, and 24 were also published in the report of the dean of the College of agriculture, 1887.

1. [Feeding hogs.] [By J. W. Sanborn.] 1883. 3p.
2. Feeding steers. [By J. W. Sanborn.] 1883. 5p.
3. Report of test of varieties of wheat and corn. [By J. W. Sanborn] 1883. 3p.
4. Mulching. [By J. W. Sanborn.] 1883. 4p.
5. Relation of tillage to soil moisture. [By J. W. Sanborn.] 1883. 3p.
6. Relation of dew to soil moisture. [By J. W. Sanborn.] 1883. 5p.
7. Feeding wheat and corn. [By J. W. Sanborn.] 1884. 4p.
8. Meal feeding stock at pasture. [By J. W. Sanborn.] 1884. 4p.
9. Grass-fed pigs. [By J. W. Sanborn.] 1884. 3p.
10. Pig feeding experiments. [By J. W. Sanborn.] 1884. 4p.
11. [Corn fodder as stock food.] [By J. W. Sanborn.] 1884. 4p.
12. [Seed potatoes.] [By J. W. Sanborn.] 1884. 4p.
13. Good roads and broad wheel tires. [By J. W. Sanborn.] 1884. 7p.
14. Feeding for lean meat. [By J. W. Sanborn.] 1885. 6p.
15. Contagious Pleuro-pneumonia. [By Paul Paquin.] 1885. 5p.
16. Glanders. Second report of state veterinarian. [By Paul Paquin.] 1885. 8p.
17. General observations. [By J. W. Sanborn.] 1885. 4p.
18. [Sub-soiling.] [By J. W. Sanborn.] 1885. 5p.
19. Feeding for lean meat. [By J. W. Sanborn]. 1886. 6p.
20. Report of investigations and observations in the Horticultural department. [By L. R. Taft.] 1886. 6p.
21. Plants and their uses. [By S. M. Tracy.] 1888. Chart.
22. Corn harvesting. [By J. W. Sanborn.] 1886. 6p.
23. Relation of dew to soil moisture. [By J. W. Sanborn.] 1886. 14p.
24. Report of state veterinary inspector. [By Paul Paquin.] 1886. 22p.
25. [Data regarding several economic problems in ordinary farm practice.] [By J. W. Sanborn.] 1886. 7p.
26. [Report of trials of varieties of vegetables and fruits.] [By L. R. Taft.] 1887. 7p.
27. Feeding for flesh. [By J. W. Sanborn.] 1887. 15p.
28. Maintenance ration for pigs. [By J. W. Sanborn.] 1887. 25p.

29. Rotation of crops. [By J. W. Sanborn.] 1887. 10p.
30. Fertilization. [By J. W. Sanborn.] 1887. 14p.
31. Texas fever and other diseases. [By Paul Paquin.] 1887. 13p.
32. Plows and plowing. [By J. W. Sanborn.] 1888. 19p.
33. Glanders, mad itch of cattle, etc. [By Paul Paquin.] 1888. 15p.
34. Experimental farming. [By J. W. Sanborn.] 1888. 10p.
35. Grasses for pastures and for meadows. [By J. W. Sanborn.] 1888. 9p.

AGRICULTURAL EXPERIMENT STATION BULLETINS

The following number of the bulletins are out of print: 1-101, 103-106. An index has been issued for bulletins 1 to 104. Future volumes will be indexed as published. An index will be issued with the completion of each volume of the Research bulletins.

1. Announcement to farmers; the so-called "Hatch bill"; Assent of governor; plan of organization; work and experiments proposed this season; personnel of station. [By P. Schweitzer.] 1888.
2. Grasses for pastures and for meadows. [By J. W. Sanborn.] 1888.
3. Generalities and experiments in spraying cattle. Appendix on glanders. By Paul Paquin.
4. A list of tillage implements. By J. W. Sanborn. 1888.
5. Soil, weather, field trials with corn. By P. Schweitzer. 1889.
6. Experiments on seed germination, pea weevil and apples. [By J. W. Clark.]
7. Experiments on green versus dry storage of fodder. [By J. W. Sanborn.]
8. Experiments on feeding ensilage against dry fodder. [By J. W. Sanborn.]
9. Study of the life history of corn at its different periods of growth. By P. Schweitzer. 1889.
10. Analysis of apples at various stages of growth. Bordeaux mixture for grape rot. Comparative tests of small fruits and potatoes. [By J. W. Clark.] 1890.
11. Texas fever. By Paul Paquin. 1890.
12. Black leg. By Paul Paquin. 1890.
13. Reports on spraying for the codling moth, apple scab and black rot of the grape. Reports on strawberries, raspberries, blackberries, tomatoes, peas and potatoes. List of new fruits received for testing. [By J. W. Clark.] 1891.
14. Field experiments with corn. [By H. J. Waters.] 1891.
15. Wheat—test of varieties, 1889, 1891. Oats—test of varieties,

1889, 1891. Change of seed—wheat, oats and potatoes. [By H. J. Waters.] 1891.

16. Covering peach trees to protect the fruit buds. Spread of pear blight, temperature and rain tables, strawberry tests, potato trials, seedling fruits. [By J. W. Clark.] 1891.
17. Sugar beets. [By Chas. Fox.] 1892.
18. Strawberries. [By Chas. Keffer.] 1892.
19. Soils and fertilizers, Part 1. [By P. Schweitzer.] 1892.
20. Soils and fertilizers, Part 2. [By Paul Schweitzer.] 1893.
21. Field experiments with wheat. [By C. M. Conner.] 1893.
22. Seedling strawberries. [By Chas. Keffer.] 1893.
23. Grape culture. [By Chas. Keffer.] 1893.
24. Comparative tests of different breeds of beef cattle. [By P. Schweitzer.] 1894.
25. An inquiry into the composition of the flesh of cattle. [By P. Schweitzer.] 1894.
26. Dairy management. [By A. M. Soule.] 1894.
27. Spraying apple trees for destruction of insects, and prevention of fungous diseases. [By Chas. Keffer.] 1894.
28. Feeding tests with difference breeds of beef cattle. [By P. Schweitzer.] 1895.
29. Feeding wheat to pigs. [By P. Schweitzer.] 1895.
30. Spray calendar. [By E. G. Lodeman.] 1895.
31. Spraying orchards and vineyards. [J. C. Whitten.] 1895.
32. Field experiments with corn. [By H. J. Waters and C. M. Conner.] 1895.
33. Enquiry into the principles of potato growing and tests of varieties. [By P. Schweitzer.] 1896.
34. Manures and fertilizers. [By H. J. Waters.] 1896.
35. The Wooly-Aphis of the apple. [By J. M. Stedman.] 1896.
36. The lesser apple leaf folder. The leaf crumpler. [By J. M. Stedman.] 1896.
37. Texas fever. [By John W. Connaway.] 1897.
38. Winter protection of the peach. Peach growing in Missouri. [By J. C. Whitten.] 1897.
39. Influence of width of tire on draft of wagons. [By H. J. Waters.] 1897.
40. Sugar beet. [By H. J. Waters.] 1897.
41. San Jose scale in Missouri. [By J. M. Stedman.] 1898.
42. A new orchard pest: the fringed-wing apple-bud moth. [By J. M. Stedman.] 1898.
43. Winter forcing of asparagus in the open field. Asparagus culture for Missouri. [By J. C. Whitten.] 1898.

44. The fruit tree bark beetle. The common apple tree and peach tree borers. [By J. M. Stedman.] 1898.
45. The sugar beet. [By H. J. Waters.] 1899.
46. Grapes: 1. The study of types and varieties. 2. The study of the pollination of cultivated grapes. 3. Methods pursued by practical growers. [By J. C. Whitten.] 1899.
47. The tarnished plant bug. [By J. M. Stedman.] 1899.
48. Texas fever. [By J. W. Connaway and M. Francis.] 1899.
49. Apple orchard. [By J. C. Whitten.] 1900.
50. Test of spray nozzles. [By N. O. Booth.] 1900.
51. The chinch bug. [By J. M. Stedman.] 1902.
52. Influence of height of wheel on the draft of farm wagons. [By T. I. Mairs.] 1901.
53. Breeding experiments with sheep: 1. Some factors influencing the weight of lambs at birth. 2. Milk and food records of ewes. [By Frederick B. Mumford.] 1901.
54. The strawberry false-worm. The strawberry leaf-roller. [By J. M. Stedman.] 1901.
55. Pruning peach trees. [By J. C. Whitten.] 1902.
56. Dairy husbandry. [By C. H. Eckles.] 1902.
57. Raising calves with skim milk. [By C. H. Eckles.] 1902.
58. Feeding the dairy cow. [By C. H. Eckles.] 1902.
59. Corn improvement for Missouri. [By Geo. M. Tucker.] 1902.
60. A new Bordeaux powder. [By R. M.Bird.] 1903.
61. Apple growing in Missouri. [By J. C. Whitten.] 1903.
62. Hessian fly in Missouri. [By J. M. Stedman.] 1903.
63. Commercial fertilizers. [By F. B. Mumford.] 1904.
64. The "sting" in the apple. [By J. M. Stedman.] 1904.
65. Grain rations for dry lot hog feeding. By E. B. Forbes. 1905.
66. Analyses of commercial fertilizers. By P. Schweitzer and R. M. Bird. 1904.
67. Supplements to corn for fattening hogs. [By E. B. Forbes.] 1905.
68. Department of dairy husbandry. [By C. H. Eckles.] 1905.
    1. A test of tin can separators.
    2. A test of a fly repellant.
69. Three fungous diseases of the cultivated ginseng. [By Howard S. Reed.] 1905.
70. Analyses of commercial fertilizers. By P. Schweitzer and R. M. Bird. 1905.
71. Fruit tree leaf-roller. [By J. M. Stedman.] 1906.
72. Alfalfa growing in Missouri. [By M. F. Miller.] 1906.
73. Cowpeas. [By A. E. Grantham.] 1906.
74. Winter killing of peach buds as influenced by previous treat-

ment. [By W. H. Chandler.] 1907.

75. Wintering yearling cattle. [By H. J. Waters.] 1907.
76. Fattening cattle for the market. [By H. J. Waters.] 1907.
77. Inspection of commercial fertilizers. [By H. J. Waters.] 1907.
78. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.
79. Green forage for hogs. [By H. J. Waters.] 1908.
80. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.
81. Specific effects of rations on the development of swine. [By P. Schweitzer.] 1909.
82. Inspection of commercial fertilizers. [By P. F. Trowbridge.] 1908.
83. Soil experiments on the upland loam of southwest Missouri.
84. Soil experiments on the prairie silt loam of southwest Missouri.
85. Inspection of commercial fertilizers 1909.
86. Soil experiments on the rolling limestone upland of southwest Missouri.
87. Co-operative variety tests of corn. Variety tests of corn at Columbia.
88. Soil management in the Ozark region.
89. Forest conditions of the Ozark region of Missouri.
90. Fattening cattle on blue grass pasture.
91. Inspection of commercial fertilizers 1910.
92. Soils of Sullivan county.
93. Soils of Audrain county.
94. Factors affecting the per cent of fat in cream from farm separators.
95. Pork production with forage crops, clover, alfalfa, rape, corn, rye, grain, cowpeas, soybeans, sorghum.
96. Report of the Director for year ending June 30, 1910.
97. Co-operation among fruit growers, 1911.
98. The San Jose scale in Missouri. 1912.
99. Inspection of commercial fertilizers, 1912.
100. Influence of fatness of cow at parturition on percent of fat in milk, 1912.
101. Report of the director. 1912.
102. Combating orchard and garden enemies. 1912.
103. The silo for Missouri farmers. 1912.
104. The evergreen bagworm. 1912.
105. Partial bibliography and index of the publications of the Col-

lege of Agriculture and the Agricultural experiment station. 1912.
106. Co-operative experiments with alfalfa. 1912.
*107. Farm poultry house construction, 1912.
*108. Inspection of commercial fertilizers.
*109. Grass investigation in the Ozark uplands.
*110. Forage crop rotations for pork production. 1913.
*111. Report of the director for the year ending June 30, 1912.
*112. Corn silage for fattening two-year-old steers. 1913.
*113. Commercial fertilizers for strawberries. 1913.
*114. Corn versus oats for work mules. 1913.
*115. Rations for fattening western yearling sheep. 1913.

CIRCULARS OF INFORMATION

1. Chinch bugs and their extermination. 1895.
2. Chinch bug infection. 1895.
3. San Jose scale in Missouri. 1896.
4. Peach yellows and peach rosette. 1897.
5. Sugar beet. 1897.
6. Clover and cow peas. 1898.
7. The Wooly-Aphis of the apple. 1898.
8. Agricultural experiment station. Third biennial report of the director, on the enforcement of fertilizer control law. 1898.
9. Agricultural experiment station. Practical value of the work of the experiment station. 1899.
10. Agricultural experiment station. Spray calendar. 1902.
11. Corn as a stock food. 1902.
12. Factors in beef production. 1902.
13. Plant propagation. 1902.
14. Commercial fruit evaporators. 1902.
15. The principles of plant propagation: The Seed. 1903.
16. Fifth biennial report of the Missouri agricultural experiment station on the enforcement of the fertilizer control law. 1903.
17. On the planting and care of trees for the street and lawn. 1904.
18. The farmers' creamery in Missouri: When and how to build. 1905.
19. Suggestions for Missouri corn growers. 1905.
20. Directions for making Bordeaux powder. 1905.
21. Some fungous diseases and their treatment. 1905.
22. Feeding the orchard. 1905.
23. Fungicides, insecticides and spray calendar. 1906.
24. Beef production on high priced land. 1908.
25. Rational sheep feeding. 1908.

26. Feeding the dairy cow. 1908.
27. Feeding and care of horses. 1908.
28. Swine feeding. 1908.
29. Immunization of swine against hog cholera. 1908.
30. Missouri housekeepers' conference association. 1908.
31. Hardiness of peach buds, blossoms and young fruit as influenced by the care of the orchard. 1908.
32. Missouri apple growing. 1908.
33. Hotbeds and coldframes. Their preparation and management. 1908.
34. Instructions for spraying. 1908.
35. Protecting orchards against frosts and freezes. 1909.
36. Co-operative experiments of the department of agronomy. 1910.
*37. Variations in cream tests. 1910.
*38. The principles of maintaining soil fertility. 1910.
39. The seeding of cow peas. 1910.
*40. The seeding of alfalfa. 1910.
41. Directions for testing milk on the farm. 1910.
*42. The seeding of clovers and grasses. 1910.
43. Wheat growing in Missouri. 1910.
44. Feeding for milk production. 1910.
45. Selecting and judging corn. 1910.
*46. Factors influencing the yield of oats. 1910.
*47. Raising of calves on skim-milk. 1911.
*48. The plastered or Gurler silo. 1911.
49. The reinforced concrete silo. 1911.
*50. Selection of corn for seed and for show. 1911.
51. How to prolong the life of fence posts. 1911.
52. Growing a woodlot from seed. 1911.
*53. The seeding of cowpeas. 1912.
54. Co-operative experiments of the Department of agronomy. 1912.
55. Forage crops for swine. 1912.
*56. Some factors in wheat production, 1912.
*57. Keeping records of dairy cows, 1912.
58. The Missouri fertilizer law.
59. The farm adviser in Missouri.
60. The county farm adviser plan.
*61. Docking and castrating lambs.
62. Chinch bug and its control.
*63. Inspection service, control of insect pests and plant diseases.
64. Directions for testing cream.
65. Advantages from use of pure bred ram.
*66. Cotton seed selection for southeast Missouri.

PRESS BULLETINS

No. 1, Sept. 6, 1912 to date.

No attempt has been made to collect and record the press bulletins of the Experiment station issued before 1912. A press bulletin has been issued for practically every publication of the station.

PUBLIC SCHOOL BULLETIN

1. Plant propagation by W. L. Howard. 1902.
2. Principles of plant propagation. The seed by F. B. Mumford. 1902. Ed. 2, 1906.
3. The falling of the leaves by J. C. Whitten. 1904.
   (All out of print.)

REPORT OF THE DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION

No reports were published from 1889 to 1895 and from 1905 to 1909. Beginning with 1910, the annual report has been published as a bulletin and will be so indexed. The report for 1910 is bulletin 96. Only those papers contained in the reports, which were not published in the bulletins, are indexed as being in the reports.

1888. First annual report of Missouri agricultural experiment station. 1888.

1896. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1896. Columbia, Missouri. December, 1896. Burckhartt & Rice, Printers, Columbia, Missouri.

1897. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1897. Columbia, Missouri. December, 1897. E. W. Stephens, Columbia, Missouri.

Contents:

Report of the director VI
Manures and fertilizers, by H. J. Waters 1
Wooly-Aphis of the apple, by J. M. Stedman 36
Lesser apple leaf folder, by J. M. Stedman 62
Texas fever, by John W. Connaway 81
Winter protection of the peach, by J. C. Whitten 140
Influence of width of tire on draft of wagons, by H. J. Waters 165

1898. University of the state of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual

report. 1898. Columbia, Missouri. December, 1898. E. W. Stephens, Printer, Columbia, Missouri.

Contents:

Report of the director VI
Sugar beet, by H. J. Waters 1
Fringed-wing apple bud moth, by J. M. Stedman 36
Winter forcing of asparagus in the open field, by J. C. Whitten 54
Third biennial report on the enforcement of the fertilizer control law, by H. J. Waters 70
Sunday chemical studies, by P. Schweitzer 77
Amount of food consumed by a cow producing a large quantity of milk and butter, by W. B. Cody 113
Preliminary ecological study of plants of Columbia, by F. P. Daniels 125

1899. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1899. Columbia, Missouri. December, 1899. Press of E. W. Stephens, Columbia, Missouri.

1900. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report, 1900. Columbia, Missouri. December, 1900. Press of E. W. Stephens, Columbia, Missouri.

1901. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1901. Columbia, Missouri. December, 1901. Press of E. W. Stephens, Columbia, Missouri.

1902. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1902. Columbia, Missouri. December, 1902. Press of E. W. Stephens, Columbia, Missouri.

1903. University of Missouri. College of agriculture and mechanic arts. Agricultural experiment station. Annual report. 1903. Columbia, Missouri. December, 1903. Press of E. W. Stephens, Columbia, Missouri.

1904. Annual report December, 1904. Press of E. W. Stephens, Columbia, Mo.

RESEARCH BULLETINS

No. 1

An experimental study of the rest period in plants. The winter rest. 1910.

No. 2

A study of the cause of wide variation in milk production by dairy cows. 1910.

No. 3

Soil conditions in the Ozarks. Out of print.

No. 4

Digestion trial with two Jersey cows on full ration and on maintenance. 1911.

No. 5

Maintenance trials with five Jersey cows. 1911.

No. 6

Distribution of farm labor by O. R. Johnson. 1913.

No. 7

Nutrients required for milk production. 1913.

No. 8

The killing of plant tissues by low temperature. 1913.

SHORT WINTER COURSES IN AGRICULTURE

1894 to date.

The title of the course given January-March, 1893-1896 was Farmers short courses. From 1900 to date this is published as a number of the University bulletins. The title now is "Announcement of the two-year winter course and the Short courses, College of Agriculture" The list follows:

Farmers' lecture course. January 2, 1894, to March 31, 1894.

Short winter course in agriculture. January 2, 1896, to March 26, 1896.

Short winter course in agriculture, and Short winter course in horticulture, January 5, to March 30, 1897.

Short winter course in agriculture, and Short winter course in horticulture. January 4, to March 29, 1898.

Short winter course in agriculture, and Short winter course in horticulture. January 3, to March 28, 1899.

Short winter courses in agriculture. January 2, to March 23, 1900.

Short winter courses in agriculture, horticulture and dairying. January 1, 1902, to March 22.

Short winter courses: agriculture, dairying, and animal husbandry. January 4, 1906.

Short winter courses: agriculture, Dairying and animal husbandry. January 2, 1908.

Short winter course in agriculture. November 1, 1909, to February 25, 1910.

Short winter course in agriculture. November 1, 1910, to February 23, 1911.

Two year winter course and the Short courses. October 31, 1911, to February 22, 1912.

Two year winter course and the short courses. November 4, 1912, to February 21, 1913.

Two year winter course and the short courses. November 3, 1913, to February 21, 1914.

SCHOOL OF MINES

BULLETIN

Issued quarterly

VOLUME 1, 1908-9

1. December. Commencement address "The human side of a mining engineer's life" by Edmund B. Kirby.
2. March. 38th Annual Catalogue.
3. June. Education for utility and culture, by Calvin M. Woodward.
4. September. The history and the development of the cyanide process, by Horace Tharp Mann.

VOLUME 2, 1909-10

1. December. The Jackling Field.
2. March. 39th Annual Catalogue.
3. June. Commencement address, "Some of the essentials of success" by Charles Sumner Howe.
4. September. Friction in small air pipes, by Professor E. G. Harris, Albert Park, and H. K. Peterson.

VOLUME 3, 1910-11

1. December. Some relations between the composition of a mineral and its physical properties, by Professor G. H. Cox and E. P. Murray.
2. March. Catalogue 1910-1911.
3. June. Providing for future generations, by E. R. Buckley.
4. September. (General information).

VOLUME 4, 1911-12

1. December. Fortieth anniversary. Parker memorial address, etc.
2. March. Catalogue 1911-12.
3. June. Commencement address, Mining and civilization, by James Ralph Finlay.
4. September. (General information).

VOLUME 5, 1912-13

1. November. (General information)..
2. March, 1913. Catalogue 1912-13.

TECHNICAL SERIES

Published quarterly

VOLUME 1

1. November, 1911. Friction in air pipes, by E. G. Harris.
2. February, 1912. Metallurgical and ore dressing laboratories of the Missouri School of Mines and Metallury, by D. Copeland, H. T. Mann, and H. A. Roesler.
3. May, 1912. Some apparatus and methods for demonstrating rock drilling and the loading of drill holes in tunneling, by L. E. Young.
4. August, 1912. Friction in air pipes by G. E. Harris.

Biennial report of the executive committee, 1889-1890 to date.

Note: The biennial report of the board of curators contains also reports on the School of Mines.

Announcement of the Summer School. Annually 1909 to date.

Catalogue: Number 1, 1872, to date.

(Also published in the Catalogue of the University but not in the same form.)

Scientiae baccalaureus: Vol. 1, 1890-91.

(No more published)

APPENDIX

Miscellaneous publications:

A. Publications issued regularly.

B. Publications suspended.

A. PUBLICATIONS ISSUED REGULARLY

BOARD OF CURATORS

Biennial report.

Annual report, 1840-48, biennial 1849-50 to date.

Note—"Before 1855 the reports were made to the secretary of state; afterwards to the General Assembly. The second report was for 1841-2. No reports were made for 1843, 1845, or 1847. Until 1866 the reports were included in the appendices to the Journals." The report from 1892 to date are still available for distribution.

Annual report to the governor. 1870 to date.

This report has been published in the annual catalogue of the University since 1870.

BOARD OF VISITORS

Report on the conditions and needs of the University of Missouri: 1873 in Catalogue 1873 appendix A, p. 129. 1889-90, 1900, 1901, 1902, 1904, 1906, in Biennial reports of the Board of Curators. 1904, 1906, 1908, 1910, 1911, 1912, published separately. None available for distribution.

UNIVERSITY OF MISSOURI CATALOGUE

1843 to date

This has appeared annually except from 1862 to 1865 when the Catalogue 1862-65 was published in one pamphlet. The first catalogue had eight pages, the last 1911-12 had five hundred and twenty-six pages. The title varies. In 1843 the title ran, "Catalogue of the officers and students of the University of Missouri." In 1867-9 it ran, "Annual announcement of the University of the State of Missouri containing catalogue," etc. In 1870-76 it ran, "Report by the Curators to the Governor containing catalogue announcements," etc.; in 1878-9, "Triennial Catalogue; 1886, "Annual Catalogue of the Missouri Agricultural College and University; 1891 to date it has a subtitle, "Report of the Curators to the Governor." From 1900 to date it has been published as a number of the bulletin.

The phrase "University of the State of Missouri" obtained during the years 1843 to 1851, 1857 to 1875, 1886-1900; "Missouri University" 1852-6, 1876-1886; "University of Missouri" has been in the title since 1901.

The catalogues contain considerable matter not usually found in such official publications. A catalogue of officers and graduates

appears in the catalogues for the years 1857, 1858, 1859, 1865, 1866, 1879, 1887, 1890, 1902. The catalogue for 1872 contains the address of President Read upon the opening of the School of Mines; contributions to a knowledge of the iron ores of Missouri by Professor Williams; and selections from a speech by Hon. James S. Rollins. The catalogue for 1873 contains address of President Read upon the opening of the Law College, October 9, 1872.

The catalogue for 1874 contains Missouri zinc ores and their products by C. P. Williams; contributions from the laboratory of the State University by P. Schweitzer; and Special advantages of the College of agriculture as being connected with the University by President Read.

The catalogue for 1875 contains True composition of coal and water supply of Columbia by Paul Schweitzer; and Commercial leads of Missouri by C. P. Williams.

The catalogue for 1876 contains President Read's Baccalaureate address to the law class of 1876; contributions from the laboratory of the State University by P. Schweitzer; contributions from the School of mines and metallurgy No. 4 by C. P. Williams, and report of C. P. Williams on the transfer of the geological survey to the School of mines.

The catalogue for 1877 contains report of the Missouri plow trial; for 1884-1886, Missouri State Agricultural College Farm bulletins Nos. 1-19; for 1888, Plan of co-operation of the University and the Missouri high schools and academies 1888.

The catalogue for 1902 was published in two editions, one containing graduates of the University of Missouri from its foundation to 1902.

From 1901 to date the Catalogue contains quotations from the ordinance of 1787.

Catalogues available for distribution are: 1871, 1876, 1891-6, 1897, 1905, 1906 to date.

CIRCULAR OF INFORMATION

Issued by the committee on accredited schools. Conditions for the accrediting of schools and recommendations concerning courses of study, methods of instruction and the equipment of laboratories and libraries in secondary schools. 1896, 1897, 1901, 1902 third edition revised; 1907 fourth edition revised; 1911 fifth edition revised (pub. as University bulletin education series, vol. 1, no. 1).

In 1896-7 the title was Suggestions to secondary schools for the equipment of laboratories, etc. All out of print.

ANNOUNCEMENTS OF THE VARIOUS SCHOOLS

The announcements of the courses offered by the various schools are now published in the general series of the bulletin. Only those schools whose publications begin prior to the first volume of the bulletin are treated separately.

SCHOOL OF ENGINEERING. ANNOUNCEMENTS

1878 to date.

(Not published in 1912)

Since 1900 the announcement has been published as a number of the University bulletin. For numbers available for distribution see University bulletin.

GRADUATE SCHOOL. ANNOUNCEMENTS

1899-1900 to date.

Since 1910-11 this has been published as a number of the University bulletin. 1899-1908 are out of print.

SCHOOL OF LAW. ANNOUNCEMENTS

1875 to date

Since 1901 the announcement has been published as a number of the University bulletin. (The Medical and Law School announcements for 1875-6 were published in one pamphlet.) The announcements for 1873-4 were published in the annual catalogue. For numbers available for distribution see University bulletin.

SCHOOL OF MEDICINE. ANNOUNCEMENTS.

1875 to date

Since 1900 the announcement has been published as a number of the University bulletin. (The Medical and Law school announcements for 1875 were published in one pamphlet.) The announcements for 1873-4 were published in the annual Catalogue of the University. For numbers available for distribution, see University bulletin.

SUMMER SCHOOL. ANNOUNCEMENTS.

1892 to date

From 1900 to date the announcement has been published as a number of the University bulletin. (The early numbers bore the title "Special courses of instruction offered by professors in the University of the State of Missouri to the teachers of the state.") For numbers available for distribution, see University bulletin.

COMMENCEMENT PROGRAMS

1843 to date

COMMITTEE ON STATISTICS.

Report of statistics on scholarship of fraternities, sororities, athletes, etc. 1908 (summer session) to date.

The Committee makes two reports annually, one for each semester. The Committee also reports irregularly on statistics of grading. For copies of these reports address, Chairman Committee on Statistics.

HIGH SCHOOL DAY

Annual announcement 1904 to date. Out of print.

UNIVERSITY HIGH SCHOOL

(Formerly Teachers College high school.)

Annual announcement 1906-7 to date. Out of print.

UNIVERSITY OF MISSOURI DIRECTORY

A register of the offices of instruction and administration and the students at Columbia. Annual 1911-1912 to date. Out of print.

Rules and regulations for the guidance of students. Annually 1893 to date. Out of print.

Schedule of lectures and recitations and directory. 1891, 1898, 1900 to date. Out of print.

B. PUBLICATIONS SUSPENDED

HISTORY AND POLITICAL SCIENCE DEPARTMENT.

Announcements 1892 to 1908-9.

Irregular. Title varied. In 1892 it was Political science department; 1893-4 History and political economy department; 1908-9 an-

nouncement of the division of history and political sciences, comprisin the departments of history, economics, political science and public law, and sociology. (Out of print.)

Kansas City Society of University Extension.

Lectures offered by professors in the University of the State of Missouri. 1892; 1893. Out of print.

Official Directory, University, Teachers, Officers, etc. 1906-07—1910-11. This was a narrow broadside giving the names, telephones, offices, etc., of teachers and officers of the University. Continued by University of Missouri directory, 1911-12. Out of print.

Program of Examinations.

Published for each semester. 1885, 1893-1905. In 1902 the title was Schedule of examinations. Out of print.

UNIVERSITY OF MISSOURI MUSEUM BULLETIN.

Vol. 1, No. 1, May, 1884. Niagara fossils, by J. W. Spencer. Out of print.

UNIVERSITY NEWS ITEM

Semi-monthly. (Feb. to Aug. 1899). Ten cents a year (Broadside). W. G. Manly, Manager. Out of print.

UNIVERSITY NEWSLETTER

March 1, 1900, to September 3, 1901. Thirty-seven numbers. Milton M. Dearing, editor. Published semi-monthly. (The first 16 numbers were broadsides.) Out of print.

UNIVERSITY OF MISSOURI NEWSLETTER

Vol. 1, No. 1, Sept. 1, 1906. Merrill Otis, editor.

The number of Newsletters published is not known. There were special newspaper bulletins published during 1897-1898. Newspaper bulletins in 1902, and in 1904, and Press bulletins in 1904, edited by Fred Kelsey, publisher. The files have not been preserved, consequently it is not known precisely what was published. The purpose of all these bulletins and newsletters was to furnish the press of the state with exact information in regard to the University.

UNIVERSITY OF MISSOURI NEWSPAPER BULLETINS

It is not known what numbers were published. Some have dates, some are without. Probably published between 1902 and 1904. A special newspaper bulletin was also published, eleven number appearing during 1897-8.

PRESIDENT'S REPORTS

President's annual report to the Board of Curators 1900-1901 to 1907-1908. Still available for distribution, 1900-01 to 1902. 1903-4 to 1908.

THE
UNIVERSITY OF MISSOURI
BULLETIN

VOLUME 16 NUMBER 30

LIBRARY SERIES 7

A LIBRARY PRIMER
FOR
MISSOURI HIGH SCHOOLS

BY

HENRY ORMAL SEVERANCE
Librarian

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
October, 1915

PREFACE

The purpose of this bulletin is to furnish a guide for teachers who wish to organize high school libraries. It will be found serviceable as well to the untrained librarian of the small public library.

The importance of a modern high school is being stressed by educators. The Committee on accredited schools of the University of Missouri is insisting on library facilities as a condition of accrediting schools. It is said that about ninety per cent of the high schools of the United States have collections of books for the use of the students and teachers. The laboratory method of teaching presupposes a high school library. In fact, no really good high school is possible without a fair library equipment.

In the preparation of this Library Primer I have made use of all similar publications, and am indebted especially to Miss Elizabeth B. Wales, Secretary of the Missouri library commission, for her criticisms and suggestions, and for the article on Cataloging.

HENRY O. SEVERANCE,
Librarian.

Columbia, Missouri.

CONTENTS

Preface 3
Chapter I. Parts of a book 5
Chapter II. Reference books 7
Chapter III. Book selection and buying and accessioning 13
Chapter IV. Classification and cataloging 16
Chapter V. Preparation of books for the shelves 24
Chapter VI. Equipment and supplies 27
Appendix. Abridged classification 29

CHAPTER I

THE PARTS OF A BOOK

(a) Physical parts.

If we should dissect a book, we would find that it is made up of a number of sections, and each section of a number of leaves. The sections are known as forms and are usually numbered by figures, the number being placed on the lower right-hand corner of the first page of the section. These sections are made up of sixteen leaves in the medium sized books and four leaves in the folio books.

The leaves of each section are sewed together. At the middle of each section in the fold between the two pages, the long stitches are visible. These sections in turn are fastened to each other in sewing. In new books, all the sewing is done by machinery. In rebinding, it is done by hand and the sections are sewed to tapes or cords.

In binding new books, the book is pressed, the back rounded, and a strip of thin cloth, called "super", is glued on the back to reinforce the sewing and to form supports for the cover. This strip projects about half an inch each side of the book. The covers for such books, called "cases", are put on, and the projecting edges of the super are pasted to the inside of the cover. Then the cover paper is pasted on over this to the inside covers of the book. The super, which is not so strong as checsecloth, is not durable. It is especially liable to break, on account of the glue, when the book is opened violently the first time.

To open a stiff new book, hold it with the back down on a table, letting the lids lie open so that they also touch the table. Open the leaves a short distance from the front and then an equal distance from the end, gently pressing them down; open a few more leaves from the front and again at the end, and so on until you reach the middle of the book. Do this to ease the book a couple of times if necessary. Opening a new book quickly or forcing it open is liable to "break its back".

(b) The printed parts of a book.

The principal parts of a printed book are: the title page, preface, contents, text, and index. Frequently there are only two parts, the title page and the body of the book, as in the case of many novels. In most books, the title page is preceded by a half title, sometimes called the binder's title, which is often the same as the title printed on the back of the bound book. The copyright notice is usually on the back of the title page. Many books have a dedication which is

on the page following the copyright notice. A few writers find it convenient to put illustrative matter, statistics, and the like in an appendix. The appendix follows the text and precedes the index.

Title page. The title page contains the title of the book, the author's name, the publisher, date and place of publication. The edition other than the first is printed on this page, as is also the name of the editor or translator, if it is a book which has been edited or translated by another writer. The title usually gives an indication of the contents of the book, such as "Guide to periodicals and serials", which indicates the content and scope of the book. The name of the author followed by a list of his works or by the names of the societies of which he is a member indicates to a large extent the value of the work. The edition of the work designated as revised, enlarged, etc. indicates that the book has been corrected, or rewritten, and additions made. The term "edition" is often used for "impression". The publishers may run off five thousand copies of A's History in 1913 and from the same plates with a new date on the title page a thousand in 1914. This would be a new impression. The copyright date is the infallible guide to the date the book was printed. Publishers as a rule secure new copyrights whenever any corrections or additions have been made in the text of the work. The date on the title page is frequently misleading.

The name of the publisher will tell whether we may expect a correct text. The name of Houghton, Mifflin & Company or the MacMillan Company, for instance, on the title page means that the book is worth while, that the text is free from omissions and mistakes, and that the typography and paper are excellent. The names of certain publishers are practically a guarantee that the mechanical features of the book are first class.

Preface. The "preface", frequently termed "introduction", usually gives the writer's purpose in writing the book and, in general terms, the content and scope. Occasionally, the introduction is written by a friend of the author who is in entire sympathy with the author's aims and views. A "foreword" is another term sometimes used for introduction.

Contents. The table of contents follows the preface and precedes the list of illustrations. The table is a list of the titles of the chapters, or of the subjects treated in the book. The list is arranged, not alphabetically, but in the order of treatment in the book. These titles are usually brief but may be of sufficient length to indicate the scope and content of the chapters. The classifier can usually determine from the title page, preface, and contents the subject of the book and consequently the class to which it belongs.

The text. This is the main part of the book and is usually divided into chapters. Explanatory notes and references to source material

are printed at the bottom of the pages in smaller type. They are separated from the text so as not to interrupt the thought with too much detail. In case the reader may want further information, he can secure it by examining the references given at the bottom of the page.

Index. An index is an essential adjunct to a large work and a great convenience to a small one. It is an alphabetical list of all subjects treated in the text with the numbers of the pages on which they are mentioned. "It is the key to the book". When there are several volumes in a work, the index is in the last volume.*

CHAPTER II

REFERENCE BOOKS

The Circular of information to accredited schools contains a good list of books to be purchased for high school libraries.* It is the purpose of this chapter to suggest and describe others which are distinctively "reference books". We mean by this term those books which are used in the library to answer questions. They are books not to be read through but to be consulted for information. They are books which are liable to be used any minute to answer questions. They are books containing a great many facts, and include such works as dictionaries, encyclopedias, almanacs, yearbooks, and the like. This list is somewhat restricted thru a desire to describe only those which would be recommended for a small library.

Dictionaries.

There are two excellent medium priced dictionaries: The New international, and The New standard. The one or the other should be in every school whether a district school or a high school.

The New International Dictionary, Springfield, Mass., Merriam, $12. It contains about 400,000 words. This work has been thoroughly revised. The supplementary material which had been published in the Supplement from 1890 to 1909 has been included in the main work. Statistical matter was added, and a few other changes were made in 1913. The supplementary lists, with the exception of the geographical gazetteer and the biographical dictionary, have been incorporated in

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*See Ward, Practical use of books, p. 8, for illustration of indexes.

*This circular may be secured by addressing Dr. J. H. Coursault, editor of the Education series of the University bulletins.

the main work. Each page is divided horizontally by a heavy black line. Above this line are the words in general use, below are the unusual, the obsolete, abbreviations, and the like. The definitions are concise, illustrations ample, quotations plentiful, and synonyms good. It is a "dictionary of long standing and has a reputation for all round use".

The New Standard, N. Y., Funk & Wagnall, $12, is a revision of the Standard made in 1913 and contains about 450,000 words. It is full of illustrations and quotations. It is Encyclopædic in character, giving fuller definitions than are usual in a dictionary. Proper names and abbreviations are included in the body of the dictionary. "A popularly arranged and good all round dictionary, particularly for office and journalistic use."

The Century dictionary and encyclopædia, N. Y., Century Co., $75, revised in 1911, has been placed on the market at a great reduction, owing to the publisher's discontinuing the work. It is a scholarly work containing dictionary and encyclopædic features, cyclopædia of names, and an atlas. It contains about 500,000 words, is rich in quotations, and well illustrated. It is worth while for the small school libraries, and is indispensable for the larger libraries. It can be purchased now for about $30 in buckram binding.

Encyclopædias.

The encyclopædia differs from the dictionary in that the former treats subjects, the latter words. The two are somewhat combined in the Century Dictionary and Encyclopædia. The whole realm of knowledge is the province of the encyclopædist. It is a "work in which the various topics included under several or all branches of knowledge are treated separately". The modern general encyclopædia is alphabetical in arrangement, and treats 40,000 to 70,000 different subjects. For reference work, the encyclopædia is the indispensable tool. Every library, therefore, should have a good encyclopædia.

New International Encyclopædia, ed. 2, 24 volumes, N. Y., Dodd, Mead & Co., $120. This work is being revised and published a few volumes at a time. The first appeared in 1914, and the last will be published probably in 1916. It is a scholarly work, carefully edited, with excellent maps and illustrations, is popular in its treatment of technical subjects, embraces about 70,000 topics, is full of cross references, and is first class in every way and unsurpassed as a ready reference work. The work will be kept up to date by the New international yearbooks. "Its strength is in its all-roundness".

Encyclopædia Americana, 1913, 22 volumes, N. Y., Scientific American compiling department, $132. "Its strength is apparent in its ample treatment of scientific topics generally, and more especially in its American topics."

Encyclopædia Britannica, ed. 11, 1910, 29 volumes, N. Y., Cambridge University Press, $145. This is a standard scholarly work of reference. The articles were rewritten for this edition. The larger subjects like geology have been broken up in smaller divisions. It still retains many monographic features. The whole work is indexed in volume 29. It is, therefore, a scholarly reference work, but not a ready reference work in the sense that the New international encyclopædia is. A "Handy Volume" issue of this work, which sells for $48, cash, ordinary paper, cloth binding, is being put out by Sears, Roebuck & Co. of Chicago.

There are several cheaper encyclopædias which have worth. If a library cannot afford one of the encyclopædias described above it might purchase Appleton's New practical cyclopædia, six volumes, N. Y., 1910. $18. This is a small popular work.

Indexes to Periodicals.

The value of periodical material is greatly enhanced by indexes. The index is a key to the articles published in the journals analyzed. There are indexes covering the several fields of knowledge, but the indexes to general literature are the only ones recommended to small libraries.

Poole's index to periodical literature. Abridged in one volume. Boston, Houghton, Mifflin & Co., $12. This indexed 37 magazines from 1815 to 1899 and with a supplement, 1899-1905, $5, brings the titles up to 1905.

Readers' guide to periodical literature, White Plains, N. Y., The H. W. Wilson Co. This contains an author and a subject index to sixty-two magazines and to a considerable number of books. It is published monthly with monthly, quarterly and yearly cumulations, at $12 a year. The quarterly numbers may be furnished to libraries which receive currently not more than twenty periodicals indexed in the Guide, for $4 a year. The annual Eclectic catalog which preceded the Quarterly cumulations of the Guide, could be purchased from the H. W. Wilson Company for $3.50. The work beginning in 1908 together with the quarterly numbers of the Guide would be sufficient for the small library.

The Poole indexes, not abridged, and the Readers' guide with its supplement and monthly cumulations are indispensable in the larger libraries.

Information, $2 a year, N. Y., R. R. Bowker Company. This periodical is a continuation of Index to dates of current events. It gives information on current events and references to dates when the material appeared in the newspapers.

Other good indexes are:

Readers' guide supplement, which indexed 74 periodicals not covered by the indexes listed above, and published by the H. W. Wilson Company, White Plains, N. Y.

Industrial arts index, a subject index to a selected list of engineering and trade periodicals and published by the H. W. Wilson Company, White Plains, N. Y.

A. L. A. Index to general literature, which indexes books of a composite nature like essays, monographs, papers, etc. Published by American Library Association, Chicago.

Guide to Current periodicals and serials of the United States and Canada, 1914. Ann Arbor, Mich., George Wahr, $2.50. Part 1 is an alphabetical list of the periodicals with publisher, place and date of publication. Part 2 is a classified list of the periodicals given in part 1.

Sociology.

Bliss, New Encyclopædia of Social Reform. N. Y., Funk Wagnall, $7.50. Recent information on social problems will be found in the current magazines such as the Survey and the American journal of sociology. The encyclopædia is a compact work of reference, designed for workers and students of social reform. It was written by specialists and contains references on the topics discussed.

A Guide to reading in social ethics and allied subjects. Cambridge, Mass., Harvard University, $1.25. The purpose of the work is to give a selected list of books on such subjects as social institutions, social service, industrial education, immigration, religious education, etc. The descriptive notes following the titles of the books indicate the value of the works.

Statistics, Annuals, etc.

Current statistics are found in periodicals and the annual publications described below.

World almanac, 50 cents in cloth binding, N. Y., The World. This is probably the most useful book in the library and should be in every school. It covers practically every topic on which one wishes statistical information.

Statesman's year book, N. Y., MacMillan Co., $3.00. This is one of the most important year books. It gives descriptive and statistical information in regard to all the countries of the world such as area, population, government officials, education, religion, finance, production, commerce and the like.

The statistical abstract of the United States. Free. This is published annually and is the most useful summary of statistics relating to the United States.

U. S. census office. Abstract of the 13th census. Free. Contains in condensed form the principal statistics of the 1910 census on population, agriculture, manufacturing, and mining. Many libraries will find the ten volumes of the 13th census and the census reports on special subjects very useful.

U. S. Congress. Official congressional directory. Free. A new issue is published at the beginning of each session of Congress. It contains names and addresses of congressmen and other government officials, including U. S. consuls and foreign consuls in the United States.

These government publications may be secured through representatives and senators in Congress.

Wyer, J., jr. U. S. Government documents in small libraries, Chicago American Library Association, $0.15. Gives method of securing documents and descriptive list of documents suitable to smaller libraries.

The American year book and the New international year book are very useful reference books. Either one should find its place in the high school library.

Missouri blue book. Official manual of the State of Missouri published annually by the Secretary of State. Free. Should be in every library in the state. It is a comprehensive work giving biographical sketches of all state officers, the departments of the state government, the state institutions political parties, etc. It is a handbook of information on Missouri.

Missouri red book, published annually by the Bureau of Labor Statistics. Free. Gives information on labor resources, advantages, opportunities, and production of the State.

Education.

Monroe, Paul, Cyclopædia of education, 5 volumes, The MacMillan Company, $25. The best work of its kind.

U. S. Bureau of education. Bulletins and annual reports. These can be had from the Bureau on request. They contain useful material for any library.

Useful Arts.

Hopkins, A. A., Scientific american cyclopædia of formulas, N. Y., Munn & Co., $5. 15000 recipes and formulas used in the trades, arts and household. Covers such subjects as inks, vermin exterminators, dyes, bleaches, garment cleaning, photographic formulas, extracts, syrups, bronzing and gilding.

Literature.

Hoyt and Ward. Cyclopædia of practical quotations, N. Y., Funk & Wagnall, $6. Arranged under subjects instead of chronologically

like Bartlett's, English quotations first, then Latin and foreign. Full indexes. The most useful work for quotations by subjects.

Brewer, E. C. Dictionary of phrase and fable. New ed., Phila., Lippincott, $3.50. "Derivation, source and origin of common phrases, allusions, and words that have a special meaning." Appendix contains a list of English authors and their works.

Warner. Library of the world's best literature, ancient and modern, 31 volumes, N. Y., Warner Library Co., $77.50. Can be purchased second hand for about $30. Best compilation of its kind. Furnishes a mine of information which cannot be found in the ordinary school or public library.

Stedman and Hutchinson. Library of American literature, 11 volumes, N. Y., Charles L. Webster & Co., $33.00. Contains selections from American authors, sketches of their lives, list of noted sayings, etc. "The design is to afford the reader a general view of the course of American literature from the outset."

Bryant. New library of poetry and song, with his review of poetry, and poetry from the time of Chaucer. N. Y., Baker and Taylor. $5.00. Popular poems and poetical extracts. Indexes.

History, Biography and Geography.

Harper's dictionary of classical literature and antiquities, N. Y., American Book Company, $10. Includes Greek and Roman antiquities, biography, geography, history, literature, mythology. Has illustrations and maps.

Lippincott's biographical dictionary, Philadelphia, Lippincott, $8. An excellent general biographical reference book bringing the record of noted persons down to the close of the 19th century.

Lippincott's new gazetteer, Philadelphia, Lippincott, $10. It is a geographical dictionary of the world. An excellent reference work.

Heilprin, Historical reference book, N. Y., Appleton & Company, $2.50.

Harper's Encyclopædia of United States history, 10 volumes. N. Y., Harper and Brothers. Second-hand about $10.

There are several good reference books on historical subjects such as Larned's History for ready reference, 7 volumes, $35.00, and Hayden's Dictionary of dates, but for the small library Harper's Encyclopædia would answer most questions on American history.

Cram's Universal Atlas, Chicago, George F. Cram, $10.

Rand McNally Unrivalled atlas of the world, Chicago, Rand McNally, $7.

Of the larger atlases, the library atlas of the World, 2 volumes, Chicago, Rand McNally, $25 is the latest and best. The Century atlas which is a volume of the Century dictionary is very satisfactory.

Debating Material.

Debaters handbook series, $1 each. These handbooks of which twenty-seven have been published, furnish bibliographies on all the questions treated and give selections from magazines and from other material on the various questions such as woman suffrage, municipal ownership, and the like. The H. W. Wilson Company who publish the handbooks, loan articles printed in magazines, either singly or collectively at a nominal price. If a library should wish to borrow several articles on any debate question it could get them from this firm.

Craig. Pros and Cons. $1.50. Complete debates with questions fully discussed on both sides.

Foster. Debating for boys. $1.

Phelps. Debaters' Manual. $1.

CHAPTER III

BOOK SELECTION, BUYING AND ACCESSIONING

Book Selection

It is an easy matter to select the first hundred books for a school library as the law requires them to be selected from the list published by the Superintendent of Public Instruction of the State.*

Schools accredited by the University of Missouri are urged to purchase from the list issued in the circular of information to accredited schools, 7th edition, 1915, part III, Suggestions for the equipment of libraries. Outside of these lists there is some latitude of choice. The following are desirable helps:

A. L. A. booklist. Chicago, American Library Association, $1 a year. This is the best source from which to select current books. The purpose of this periodical is to help small libraries make selections for purchase. Brief descriptions and evaluations are given.

A. L. A. catalog of 8000 volumes for a popular library well selected and classified. 1904. Washington, Superintendent of Documents. $1. The work contains the best books on all subjects. Part I is a classified catalog; part II is a dictionary catalog of authors, titles and subjects. The decimal and the expansive classification numbers follow every title. The book is therefore helpful in the selection of books and in classifying them for the shelves.

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*See Course of study for rural and graded schools, 1913, p. 168 and Course of study for Missouri high schools, 1914, p. 79.

A. L. A. catalog supplement. 1904-1911. Chicago, American Library Association, $1.50.

Brown, Zaidee. Buying list of books for small libraries, 1913. Chicago, American Library Association, 10 cents. Copies may be secured free of expense by requesting them from the Missouri State Library Commission, Jefferson City, Mo.

Small libraries will need a few good magazines. A descriptive list has been compiled by F. K. Walter entitled *Periodicals for the small library*, 1913. Chicago, American Library Association, 10 cents. This will be found very helpful.

If the library can afford other helps it should subscribe to the Cumulative book index, monthly with an annual cumulation. The H. W. Wilson Co., $6.00 This gives all the necessary information about new books to enable one to place orders. It also gives the order number of the Library of Congress printed cards.

Children's Books. Even the small library must provide literature for children. The librarian need make no mistake in selecting books for children's reading in as much as several excellent lists have been prepared. One of the best of these is *Catalogue of books* annotated and arranged by the Carnegie library of Pittsburgh for the use of the first eight grades in the Pittsburgh schools. The books are arranged by grades. The publisher, price and class mark are given. A copy might be secured free from the Carnegie library.

Another excellent book is Hewin's *Books for boys and girls*, 3d edition 1915. Chicago, American Library Association, 20 cents.

The United States Bureau of Education has issued a circular with the title; 1000 good books for children. Classified and graded list prepared by the National Congress of Mothers literature committee. 1914. Free. The University library has recently issued *Books for children*, a list of 107 books which is intended to aid in selecting books for children. Free.

Book Buying

It is usually the best policy to purchase books through the local book store, provided the book store can furnish the books practically as cheap as book stores in large cities. If a book should be imperfect or damaged, or the wrong edition or the wrong title sent, it would be more convenient to return it to the local store. On the other hand a large reliable firm like A. C. McClurg & Company which makes a specialty of furnishing books to libraries, can usually supply the books cheaper than the local store, and the library has the advantage of the expert service of experienced bookmen who can discriminate between editions and select the most satisfactory ones for the library. In either case, the cost of transportation must be taken into account. Library books could be shipped along with the local

bookstore books thereby lessening freight charges and getting shipments oftener. It is more desirable to have new books coming into the library at frequent intervals than to have large shipments once or twice a year.

Seldom, if ever, should purchases be made through subscription agents. Subscription books can usually be secured through book dealers on favorable terms. Furthermore, the works offered by agents can usually be secured from second hand dealers, at one-half or two-thirds of the subscription price. It is not economy for a small library, or for any library with limited funds, to buy fine illustrated editions and editions in fine bindings. It is best to buy standard editions of well known authors in readable type on good paper and in durable bindings.

Make carbon copies of all orders and keep the duplicate copy on file. In the order, give author, title, place and date of publication, as: *Ward, Gilbert O. Practical use of books and libraries. Ed. 2. Boston, Boston Book Company, 1914.* Inform the book seller how to send, whether by mail, express or freight. When the books are received check them with the invoice and with the order list, crossing out all titles which have been received and noting those not supplied. These last should be reordered. Return at once any book not ordered or which is imperfect. The source, date received, and cost should be written in the book just back of the title page. Books should be collated to detect imperfections. Open the books as described elsewhere, cut the leaves with a paper knife using care not to tear the leaves in cutting.

Accessioning.

The accession book should contain a list of all the books belonging to the library. It should give the source of the book, the price paid (if purchased) and the name of the donor if it was presented. As soon as a book has been checked by the invoice and collated, it should be accessioned. The number of the book in the accession record should be put into the book on the bottom of the second page following the title.

The accession book will furnish statistics for the annual report; will identify lost books, and will serve as an inventory for insurance purposes if the library should be destroyed by fire. It is the library's chief record and should contain a complete history of every volume on its shelves.

The condensed accession book, press board covers, 1000 lines, a book to a line, costs only $1.00, Library Bureau. Directions for accessioning are printed in the book with a list of abbreviations and directions for the use of capital letters.

After the book has been accessioned, marks of ownership should be placed on its pages. Several kinds of stamps may be used for

this purpose. In the small libraries, a rubber ink stamp would answer the purpose and would be inexpensive. It should have in clear type the name of the library and should be stamped on the title page and some other page in the books such as page 99 or page 49, and the outside front cover of magazines.

Book pockets are desirable and can be made inexpensively. A square slip of paper about three by five inches tipped with paste on the bottom and the four corners to the inside front cover answers every purpose. If there is a book plate the inside back cover could be used for the pocket. Loan cards, the proper size to insert in the pocket, may be made from card board or stiff paper. Pockets with library rules printed on them and the loan cards to be used in them may be purchased if so desired. These cards should have the author's name and brief title and the call number on them.

CHAPTER IV

CLASSIFICATION AND CATALOGING

Classification

Books should always be arranged by classes even though the library is small. It is most convenient to have all the histories of the U. S. together; all the American literature by itself; all the arithmetics by themselves and so on. The purpose of classifying the books is to bring likes together, that is, books which treat of the same subject. The books should be arranged alphabetically by the author within the classes.

Books should not be classified by title. Examine the table of contents, read the preface or introduction, and if necessary, read parts of the book, especially the conclusion. The table of contents will not always give the character of the book. Usually, the preface contains a statement of the author's purpose in writing the book and his theme.

There are two systems of classification in use: the Expansive and the Decimal, but probably only one is used in the small libraries of Missouri, the Dewey Decimal System. An abbreviated form of this system will be found in the appendix. The *Abridged Decimal Classification and Relatif Index Revised*, may be secured from the Library Bureau, Chicago, in cloth at $1.50. This abridged edition would be serviceable to libraries having 1000 volumes or more to classify. The classes could be subdivided more minutely. There are ten general

classes, each divided into ten divisions. Then a decimal point is used and the division carried out until the classification is as minute as desired. The numbers thus obtained are assigned to books, and the books are arranged in simple numerical order, the numbers being treated as decimals. Thus 512 algebra precedes 513 geometry and follows 511 arithmetic. These numbers are called class numbers. If we take 942 as an example, the analysis of the number is:

Class 9—history.
Division 4—European history.
Section 2—history of Gt. Britain.

This class number is combined with another number called the book number which distinguishes one author from another in the same class such as Nathaniel Hawthorne from Julian Hawthorne and Oliver Wendell Holmes, and insures the books falling into alphabetical sequence. The class number and the book number form the call number which should be placed on the back of the book, on the book pocket, back of the title page and on the upper left hand corner of the catalog cards, example:

025—class no.
W21—book no.

The two form the call number.

In small libraries having fewer than 1000 volumes, a book number is not necessary. Only the first letter of the author's name should be used.

In individual biography the book number should be taken from the surname of the person written about so that all of his lives will come together on the shelves. In public documents consider the government as the author such as *Missouri. Secretary of State. Legislative Manual.*

In the case of societies use the name of the society, association or institute as author, such as *American chemical society. Journal.*

In periodicals take the book number from the title of the periodical such as *North American Review.*

In anonymous books take the book number from the title of the book. In fiction many libraries assign no class number but arrange the books alphabetically by authors. If a class number is desired, 823 could be used for all fiction in the English language.

Shelf List

A shelf list is a list of the books as they stand on the shelf in the order of their classification. This is usually made on cards. If printed cards are used in cataloging, one card, after having the call number and the accession number entered upon it, may be used for the shelf list. If cards are typed or written by hand, the author and short title

with the call number and the accession number are sufficient. The following illustrations show the form to be used:

631 Vivian
V First principles of Soil
Fertility, 1913
2793

The shelf list is useful in taking the inventory of the books. It is called "reading the shelves". It shows number of books in the various classes such as American literature, history and the like.

Cataloging

Library catalogs are made on cards, 3 x 5 inches in size and arranged alphabetically including authors, titles and subjects. These cards are filed in trays with rods passing through holes in the bottoms of the cards to hold them in the tray. The catalog is an index to the library and is more important for the readers than the shelf list. It can be kept up to date by inserting cards for the new books from day to day. Every book in the library is represented by two cards, often by three cards or more, an author card, a subject card and a title card.

Author Card.

Write the call numbers on the upper left hand corner of the card on all cards except cross reference cards. Write the author's forename, if there is only one and use initials if more than one, surname first, on the top line. Indent under author's name for title.

631 Vivian, Alfred
V First principles of soil fertility.
265p. 1913.

Figure 1. Author card.

In joint author cards, write both names as indicated.

422 Greenough, James and Kittredge, George L.
G Words and their ways in English speech. 431p. 1901.

Figure 2. Joint Author Card.

When the author has a pseudonym use a cross reference card.

Twain, Mark, pseud. see
Clemens, Samuel L.

Figure 3. Reference for pseudonym

Collections are cataloged under the editor's or compiler's name.

820.8 Manly, John M., ed.
M
English prose. 544p. 1909.

Figure 4. Editor card.

When the author's, the editor's, or the compiler's name is not given, catalog the work under the title.

822
E Everyman and other miracle plays. 208p. 1909. (Everyman's Library).

Figure 5. Title card.

Catalog the publications of a society or an institution under the name of the society.

510.1 Society for promotion of engineering
S education.
Syllabus of mathematics. 136p.
1912.

Figure 6. Name of society as author.

Catalog a state or city publication under the name of the state or city.

317 Missouri—Secretary of State.
M Official manual of the state of
Missouri.
Library has:
1909-10
1911-12
1913-14

Figure 7. Name of State as author.

Always copy the title from the title page, not from the half title, nor from the title printed on the back of the book. Capitalize no words in the title except the first word, proper names, and adjectives derived therefrom. The articles, *a, an, the,* occurring as the first word in a title should be omitted. The name of the translator or editor should appear in the title as,

873 Vergil
V Aeneid of Vergil done into
English verse by William Morris
ed. 2 382p 1876.

Figure 8, Translator's name in title.

When the translator or editor is a noted man, an editor or translator card should be made for him as,

873 Morris, William, tr.
V Vergil.
Aeneid. ed. 2, 382 p. 1876.

Figure 9. Translator card.

When two books are bound together use form, as shown in figures 10 and 11.

821 Gray, Thomas
G
Collected poems. 151p. 1891

Bound with Goldsmith, Oliver, Complete poems.

Figure 10. Two books bound in one.

821 Goldsmith, Oliver,
G Complete poems. 201p. 1888.
Bound with Gray, Thomas, collected poems.

Figure 11. Two books bound in one.

The number of pages in the books in single volumes should be given using the paging of the body of the work. If the work is in two or more volumes give the number of volumes as,

977 Roosevelt, Theodore
R Winning of the west. 4 v. 1889-96

Figure 12 showing no. of volumes.

Give the date of publication as on title page. If this is lacking, give copyright date found on back of title page. In writing this date, it should be preceded by a small c, thus: c1885.

921 Morse, John jr.
M John Quincy Adams. P. 331. c1882.
(American statesman series, v. 15)

Figure 13, showing copyright date.

Give names of series and volume in parentheses after the date. See figure 13.

Title card.

Cards bearing the title on the top line and the author's name beneath should be made whenever a book is likely to be known by its title. This is true of all fiction and of story books and in cases of striking titles. In writing title cards, keep the indention of both author and titles, the same as that of the author card.

```
914        Innocents abroad.
C
       Clemens, Samuel L.
```

Figure 14, Title card.

Periodical cards are similar to title cards. The title or name of the periodical should be indented.

```
605        School arts magazine.
S
       Library has:
       1904-1908     v.4-7
       1908-9        v.8
       1909-10       v.9
```

Figure 15. Periodical card.

Subject cards.

A subject card has, as a heading, the name of the subject of which the book treats. The subject headings are usually written in red ink at the top of the card, indented, with the call number in the usual place. Below the subject heading make an exact copy of the author card. In other words write an author card, then write the subject heading indented above the author's name and the result will be the subject card.

```
631        Soils
V      Vivian, Alfred
          First principles of soil fertility.
       265p.     1913.
```

Figure 15, Subject card.

Considerable care should be exercised in assigning subject headings so as to avoid confusion in the catalog. Take as a guide the headings used in the American Library association catalog of 1904, and when other headings are used make a permanent note of the words used as headings and of all references made thereto.

Analytical cards.

In the small library every bit of information should be made available. A chapter in a book or an article in a magazine may be worth a subject card in the catalog. These subjects may take the form of an author, a title, and a subject analytical card. The sample cards, Figures 16, 17, 18, will fully illustrate these entries.

808.5 Demosthenes
S Oration on the crown.
Servis, G. P.
Eloquence, 214p. 1912.

see p. 204-208.
Figure 16. Author analytical card.

821 Essay on man.
P. Pope, Alexander
Poetical works. 505p. 1907
(Globe edition).

See p. 191.

Figure 17. Title analytical card.

938 Oracles.
O Oman, C. W. C.
History of Greece. 560p. 1905.

See p. 39-46

Figure 18. Subject analytical card.

Cross Reference Cards.

Cross reference cards refer the reader to the author, the title or the subject which gives further information. The reference may be from a pseudonym to the real name as Twain, Mark, see Clemens, Samuel L.; or from a general subject like philosophy to a special subject like hygiene.

Tracings.

Tracing is of value to the librarian as a record of the cards made for each book. The record is made on the back of the author card and should indicate the headings of all the other cards made for that book. Use t. c. to indicate title cards and Jt. auth. to indicate joint-author cards but write out names of subjects in full, and use surnames to indicate editors or translators for which extra cards have been made. The accession number should also be written on the back.

Library of Congress Printed Cards.

It is advisable from the economic standpoint and from the point of accuracy and neatness to purchase printed cards from the library of Congress. It would be the exception for the small library to acquire a book for which the Library of Congress doesn't have printed cards. The Library prints cards for all copyrighted books and all other books acquired either by purchase or by gift. A duplicate of the order list could be sent to the Library of Congress as a card order. The Library of Congress prints only author cards. The subjects, titles and other cards are indicated at the bottom of the card. If there are two subjects indicated, then the librarian should order four cards; one for the author, one for the shelf list and one for each of the subjects. The subjects would need to be written above the author's name. There is a formula used in ordering which will bring the desired number of cards. Write to the Library of Congress and ask for Methods of ordering cards. The cards cost approximately 2 cents for the first card, and ½ cent each for the duplicate cards. If four cards on one author were ordered, the cards would cost about 3½ cents. The printed cards solve many difficulties for the librarian.

For further information on cataloging consult: Hitchler, Theresa-Cataloging for small libraries. 15 cents. American Library Association.

CHAPTER V

PREPARATION OF BOOKS FOR THE SHELVES

Charging System, Mending, etc.

After the book has been classed and cataloged, the call number should be written above the book pocket on the inside cover of the book, depending of course on the position of the book pocket. If the library has no book plate, the pocket may be pasted on the inside of the front cover. The call number should also be written on a label

pasted on the back of the book. The Dennison label A16 extra gummed has been found most satisfactory in the University library. This should be placed on the books at a uniform height from the bottom edge of the book. An inch and a half or two inches is a good height. The call number should be written on the label after it has been pasted on the book. India ink is the best; Sanford's or other brands will do. Shellacking the label after lettering tends to prevent soiling the label and helps to hold it on.

An inexpensive pocket consists of a plain manila slip of paper 3¼ x 4¾ inches, costing about 40 cents a 1000. The card for this pocket should be a Bristol card 2 x 5 inches, and would cost about $1.50 a 1000. At the top of the card, write the call number, the author and title. The lines below are for the reader's name and date. When the reader borrows the book he should sign the card.

Charging System.

The library meets the public at the loan desk. In small libraries the reference work is done here and general information is given out. It is the place to make friends of the public. A system of charging books must be simple and expeditious, so that the reader suffers no inconvenience by delays and incorrect records.

If pockets are put into books and cards made for the pockets as described above, the matter of charging is very simple. Take the card from the pocket and let the reader sign it. Then stamp the date the book is due on the book pocket and on the card. Let the reader take the book, file the card in the date, filing back of the date when the book is due. Usually books are loaned for two weeks at a time with a privilege of renewal. When the book is returned, open the book and look for the date on the pocket. Look in the card file for the corresponding date. Take out the card, stamp date of return, and insert it in the pocket. The book is then ready to be shelved again.

Fines of at least 2 cents a day are usually charged on books not returned on time.

Bindings and Repairs.

In the first chapter on the physical parts of a book, we dissected a volume to ascertain how the parts were put together. We found that the sections or forms were sewed to tape or cords, and to one another. When the thread holding a form to its companion breaks and lets the form loose, the book should be resewed. If a leaf becomes loose, put library paste on the inside edge, put it in place in the book and press it down with a paper knife. Another way to fasten in leaves is to use opaque gummed paper. Two or more leaves may be tipped in, in this way. The danger comes from the additional strain on the form to which they are fastened. When the form gives way there is only one thing to do—rebind the book.

For the repair of torn leaves use transparent adhesive tape, which comes in spools. When books come out of the covers, use double stitched binder. Remove the super and glue from the back. Then take the cover and with an eraser or some sharp instrument remove the super on the inside back edge of the cover. Then moisten the gummed cloth, lay the cover on its back, set the book into it, bring up the covers against the book and press the gummed cloth against the covers. This method is well illustrated in Gaylord Brothers Catalog of library supplies. If the cloth on the back of the book is worn, torn and dirty, it should be removed and another back put on by pasting the strip, the exact size, to the covers. Then the title can be printed on in black or white ink. A typewritten label might be pasted on the back.

Magazine Binders.

There are several good temporary magazine binders. The one found most serviceable at the University is the spring backbinder manufactured by W. G. Johnston & Company, Pittsburg, Pa. Price varies with the size of the magazine. An inexpensive temporary binding is made from heavy manila card board. Cut the board the right size for the magazine, cut off the front outside cover and paste it on the board. Perforate the boards and the magazine, and fasten the covers on with shoestrings. Press board could be used instead of manila card board. The flexo binders manufactured by the Gaylord Brothers are good, cheap binders, and are used by some large libraries.

Pamphlet Binders.

The Gaylord Brothers have a very satisfactory binder for temporary or permanent use. The gray photo-mount binders are good, and cost about $4.00 per hundred.

Care of Books.

The life of a book will be greatly lengthened if the following "don'ts" are observed.

Don't let the direct rays of the sun strike the backs of the books.
Don't crowd books on the shelves so that one of them cannot be withdrawn without pulling others off the shelf.
Don't let a book fall upon the floor.
Don't pick it up by one cover.
Don't lay a book on the table with the open face downward.
Don't put anything on top of an open book.
Don't set a book on its front edge; the binding will break.
Don't use a book as a portfolio to carry notes and paper in.
Don't use a lead pencil for a book mark.
Don't mark or mutilate a book.
Don't turn the corners of the leaves down.
Don't handle a book with dirty hands.

CHAPTER VI

EQUIPMENT AND SUPPLIES

Equipment.

The library reading room should be well lighted both by day and night. The north light is preferable for day. The desk light is to be preferred for evening. The lamp should be properly shaded to keep the direct rays from the eyes of the reader. The library rooms should be well ventilated and heated.

Shelving.

The shelving should be placed against the wall spaces of the room. If this space is not sufficient then free standing cases can be installed. The cases should be made with adjustable shelves. The cases should be not over seven feet high which would accommodate seven shelves, six of which are moveable. The stationary shelf should be three or four inches above the floor so that it will not catch all the dust. The shelves should be three feet long, and eight inches wide. These can be made by the local carpenter or steel cases can be purchased. The bottom shelves might be twelve inches wide to take the folio books. In estimating the capacity of shelving, use eight books to the foot as a basis. The current periodicals could be laid on their sides on the shelves in one section devoted to periodical literature, or a few pigeon holes could be made for them. These holes should be 12 inches high, 10 inches wide and 12 inches deep for the average sized periodical. A few larger ones might be made for the folio ones like the Scientific American.

Tables and Chairs.

The size of tables depends upon the size of the room. Tables ten feet long and three and a half or four feet wide make convenient study tables. Such a table will accommodate twelve readers. Any good chair will answer the purpose. Arm chairs take up too much room at the table. Cheboygan chairs, costing about $2.00 each, have been found economical and satisfactory.

Librarian's desk and chair.

These may be secured thru a local dealer. The flat-top desk and swivel chair would cost about $25.00. The desk should have drawers on either side of the opening in front. It should be placed near the exit so that readers must pass by the librarian's desk. In small libraries, there should be free access to the shelves. If the library can afford it, a charging desk should also be provided.

Supplies.

Secure catalogs from the following firms. Order by numbers and descriptions as given in the catalogs. Items not mentioned in this

list may be useful. The descriptions and illustrations in the catalogs will be suggestive.

Democrat Printing Company, Madison, Wisconsin;
Gaylord Brothers, Syracuse, N. Y.;
Globe Wernicke Company, Cincinnati, Ohio;
Library Bureau, 6 North Michigan Avenue, Chicago, Ill.;
Library of Congress, Washington, D. C. (for information on printed cards).

Accession record. 2000 line condensed accession book. $3.00.
Size rule with scale for book sizes. 20 cents.
Classification. Dewey classification decimal. Abridged. Cloth, $1.50.
Card catalog. 4 tray catalog case about $8.00.
Catalog cards and shelf list cards. (6000). If cards are to be written by hand get "Ruled for pen" cards. If typewritten, get unruled cards. Get best grade of cards which will cost from $1.75 to $3.00 a 1000. If printed cards are to be used get not more than 1000 blank cards at first.
Buff bristol guide cards. 200 in thirds. Same size as catalog cards. 50 cents per 100.
Book pockets 2000. Printed with rules for borrowers $2.50 to $4.00 a 1000.
Book cards or charging cards. Ruled. 75 cents to $1.25 a 1000.
Charging tray 55 cents.
Date guides, 1-31 in buff bristol (one set) 25 cents.
Band dater and ink pad, about 75 cents.
Dennison. Extra gummed labels, plain white. A16 oblong. 25 cents to 30 cents a box, containing 1000.
Higgins. India ink for marking labels. 25 cents a bottle.
Carters' "Koal black ink".
Carters' fast red ink.
Rubber stamp having name of the library. 50 cents.
Blank slips of paper 3 by 5 inches for notes.
White shellac, 10 cents. (Gaylord Bros.)
Ammonia 5 cents.
Camel's hair brushes. For shellac (¼ inch) and for paste (½ inch).
Library paste.
Mending materials. Consult the catalogs.
Stationery.
Tray for shelf list. Shelf list may be filed in a part of the catalog. It would be preferable to have a drawer for this purpose which should be kept on the librarian's desk. It could be kept in the boxes in which the cards were received.
Cork pen holders.
Good stub pens.

Covered glass inkwell.
Desk blotters.
Hand blotters.
Hard and medium lead pencils.
Best knife steel eraser.
Rubber eraser.
Shears.
Flat bone or ivory paper knife. 50 cents.

APPENDIX

ABRIDGED CLASSIFICATION

Libraries having a 1000 volumes and more should purchase a copy of the abridged decimal classification which gives many necessary subdivisions not indicated below.

Classification

000	**General works**
010	Bibliography
020	Library economy
030	General cyclopedias
040	General collections
050	General Periodicals
060	General societies
070	Newspapers
080	Special libraries. Polygraphy
090	Book rarities
100	**Philosophy**
110	Metaphysics
120	Special metaphysical topics
130	Mind and body
140	Philosophical systems
150	Mental faculties. Psychology
160	Logic. Dialectics
170	Ethics
180	Ancient philosophers
190	Modern philosophers
200	**Religion**
210	Natural theology
220	Bible
230	Doctrinal. Dogmatics. Theology
240	Devotional. Practical
250	Homiletic. Pastoral. Parochial
260	Church. Institutions. Work
270	Religious history
280	Christian churches and sects
290	Ethnic. Non-Christian
300	**Sociology**
310	Statistics
320	Political science
330	Political economy
340	Law
350	Administration
360	Associations and institutions
370	Education
380	Commerce. Communication
390	Customs. Costumes. Folklore
400	**Philology**

410 Comparative
420 English
430 German
440 French
450 Italian
460 Spanish
470 Latin
480 Greek
490 Minor languages
500 **Natural science**
510 Mathematics
520 Astronomy
530 Physics
540 Chemistry
550 Geology
560 Paleontology
570 Biology
580 Botany
590 Zoology
600 **Useful arts**
610. Medicine
620 Engineering
630 Agriculture
640 Domestic economy
650 Communication. Commerce
660 Chemical technology
670 Manufactures
680 Mechanic trades
690 Building
700 **Fine arts**
710 Landscape gardening
720 Architecture
730 Sculpture
740 Drawing. Decoration. Design
750 Painting
760 Engraving
770 Photography
780 Music
790 Amusements
800 **Literature**
810 American
820 English
830 German
840 French
850 Italian
860 Spanish
870 Latin
880 Greek
890 Minor languages
900 **History**
910 Geography and travels
920 Biography
930 Ancient history
940 Europe
950 Asia
960 Africa
970 North America
980 South America
990 Oceanica and polar regions

Modern

THE UNIVERSITY OF MISSOURI BULLETIN

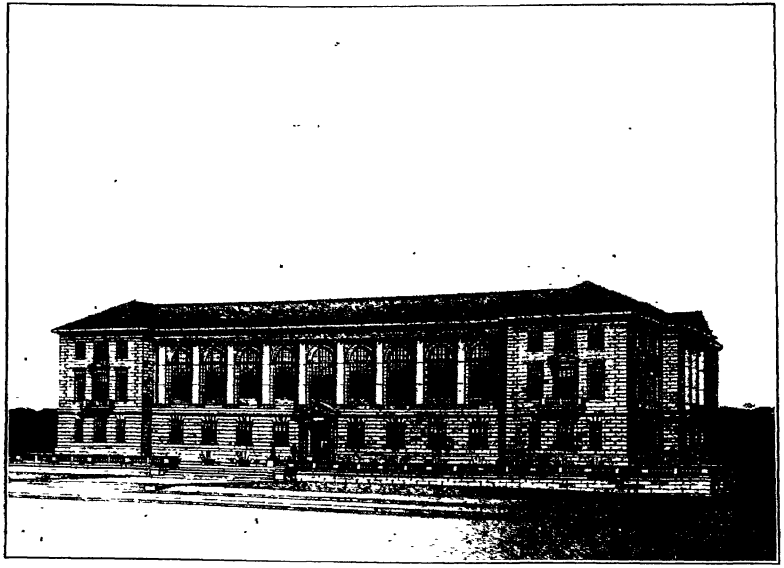
VOLUME 17 NUMBER 12

LIBRARY SERIES 8

OPENING EXERCISES OF THE NEW LIBRARY BUILDING JANUARY 6, 1916

EDITED BY
HENRY ORMAL SEVERANCE
LIBRARIAN

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
MAY, 1916



New Library Building—Completed view

INTRODUCTORY

The opening exercises of the new library building were held in the reading room of the library January 6, 1916, in the presence of about three hundred people. President A. Ross Hill presided and before introducing the speakers said in part:

I wish only to call attention to the fact that the need of a library building has been very keenly felt in the University of Missouri for a great many years. From the time that the institution came to have an enrolment of seven or eight hundred students it has been found impracticable to carry on study by students efficiently under the conditions that prevailed when the library was housed in the main building.

In the first place, it wasn't possible for any individual to work under proper conditions, and in the next place there wasn't room enough for the increasing number of students that had to make use of the library. Furthermore, the collection of books had been gradually increasing and the risk of extensive loss by fire became constantly greater, so that the need of the building became more and more keenly felt as the years went by.

Certainly we presented the needs of the University for this building to the Legislature often enough to have educated the entire state to the need of a building. I don't know how far back that plea goes but I know that from my first acquaintance with the University, and this is the thirteenth year of my connection with the institution, I have heard the call for a new library building. Perhaps it was fortunate that we didn't get the building at the time we first began to dream of it. We should not then have realized the need of a large enough building because we didn't know what the future had in store in the enrolment of students in the University. We certainly would not then have been able to secure a building large enough if we had succeeded in getting it when the institution was smaller. Furthermore, one particularly fortunate thing about it is that we missed making a great mistake in its location by getting it later. Had the library been secured about ten years ago it would doubtless have been located on the West Campus near the north end, which in the long run is going to be a remote corner of the campus. The fact that we came to build up a new campus led us to think of this location as central and thus to make the request of the Legislature to furnish a site as well as a building, and I think in the long run it is going to prove quite as important to have this site as to have secured the building at the time we did.

The building will not be completed now — just when we cannot say. But we do know this: That the facilities we find here are so much superior to those we had under the old conditions that we find ourselves in luxury to be able to move into this central portion of the building.

That brings up another matter, namely, that it seemed clearer to us as we had experience in presenting the need for this building that we were not going to get an adequate building appropriated at one time, so we had plans made for the complete building and submitted them to the Legislature, and requested the appropriation of enough money to build the central portion only. The Legislature knew that we were going to build only about half of the building with the two hundred thousand dollars that was appropriated, so they will not be surprised when we ask for an appropriation to build the wings.

The President then introduced Dr. Jay William Hudson, who gave the principal address of the occasion.

THE LIBRARY AND THE MODERN UNIVERSITY

BY JAY WILLIAM HUDSON, PH.D.,
PROFESSOR OF PHILOSOPHY, UNIVERSITY OF MISSOURI

Three days ago I stood before the new Widener Library of Harvard University. I tried to think back two hundred and seventy-eight years to the time when "The Reverend Mr John Harvard sometimes Minister of Gods Word at Charlstown, by his last Will & Testament gave towards the erecting the abovsd School or Colledge, th' one Moiety or halfe parte of his Estate', and all his books." As it was with Harvard, so has it been with nearly every great university; its founding has been inaugurated by the founding of a library, and the growth of the library has almost invariable been the concomitant of the university's development.

This historic relation of the library to the university has been made infinitely more vital because of recent changes in conceptions of education. There are four such changes which are especially significant.

First, the library has had to meet the demands occasioned by the rapid multiplication of courses, which in turn has been largely due to the rise of the elective system. More and more the modern university has tried to fulfill Ezra Cornell's ideal of a university, a place where anyone can obtain instruction in any subject. An illustration of this

multiplication of courses is found in the history of the University of Missouri during the last fifteen years. In 1900, the number of courses offered by the College of Arts was 166. During the next eight years, they had more than doubled, being 367 in 1908. In the current catalog, the number is 476, exclusive of courses offered twice during the year. This multiplication of subjects offered by the modern university has naturally meant a vast increase of the number of books absolutely needed for the purposes of instruction.

Second, the functions of the university library have become increasingly important because of the widespread adoption of the laboratory or research method in education. The laboratory method, which was once quite largely restricted to the natural sciences, is now a vital part of instruction in the social sciences as well. We are sending the students to the sources; and this means sending students to the library, for, in the social sciences, the sources, to a great extent, are books. Add to this that the natural sciences themselves increasingly encourage, besides work in the laboratories of experiment, original readings of the masters of science, then one may appreciate the significant truth that the library is not merely a laboratory co-ordinate with others, but is the central laboratory of the entire university.

A third significant fact in modern education is the growth of specialization. This specialization is most obvious in the development of graduate schools; but our universities have shown a sane reaction against an overfree election of courses by undergraduates, until there is a marked tendency to insist upon a coherence and deepening of the students' curricula. Thus, while the elective system means an increase of the library in the number of subjects represented by its books, the growth of specialization means a necessary increase in the number of books on single subjects. The modern university library must not only be extensive but intensive.

Fourth, the modern teacher is growingly constrained to adopt the sort of pedagogy which teaches a subject thru its history. Probably much of this interest in genetics is due to the widespread discussion of the concept of evolution, a concept which, rightly or wrongly, has been applied to almost every subject taught in a university. For a long time it has been the custom of philosophers to introduce the problems of philosophy through a history of philosophy. Quite recently I was in the habit of hearing teachers of certain physical sciences allege as a reason for this that since philosophy had never come to any demonstrable truths concerning any of its problems, there was nothing else for it to do than to teach the history of its failures! But now, not only are such subjects as psychology, sociology and political science taught in terms of a history of theories, but the natural scientist himself is beginning to see that one of the best introductions to the appreciation of the nature of a scientific problem is thru discovering how it first arose and how it developed thru successive attempts to solve it. For the library, this has meant not only an in-

President A. Ross Hill

crease in the number of books taking up the genesis and history of university subjects, but it has meant a vast increase of such books as open to the student the sources of yesterday's thinking, even tho the conclusions of that thinking be now modified or discarded. When I first heard that there was considerable doubt among biologists with regard to whether one can inherit acquired characteristics, I was distressed. For it seemed to me then that the doctrine was somehow necessary to make human progress possible. How could the race improve if the hard won achievements of parents could not be inherited in any measure by their children? Well, since then I have become reconciled to the newer view, principally because I realize that the characteristics most worth acquiring by succeeding generations are handed down to them thru books. An Aristotle, a Shakespeare, a Schiller, cannot indeed transmit to offspring their acquired physical characteristics, but they can do what is of much more importance to the progress of the race; they can hand down to succeeding generations forever the characteristics which they value most and which mankind cherishes most — their ideals and all the spiritual achievements wrought in the masterful pursuit of them.

It is well for our American democracy that we are thus gaining an evaluation of the present thru a perspective of the past. For it is one of the subtle dangers of our forward-looking democracy that it shall lightly and even rebelliously isolate itself from the past and thus fail truly to appreciate the real problems of the present and the responsibilities of the future. Let us hope that the new and widespread study of the great problems thru their geneses will mean a new historic consciousness which will give us that logic of history fundamentally required by democracy's tasks.

But the library of the modern university has not grown only in terms of these vital changes in education. It must grow to be a still more important factor in university life because of needs of reform in our system of education — needs which are now beginning to be felt very keenly by all who have the welfare of higher education at heart. We are beginning to see that while our students can do what they are told to do fairly well, they lack, what it is one of the chief functions of education to induce, an initiative which impels them to look beyond the textbook and the lecture for the mastery of a field. It is not merely or chiefly the performance of the task set by the teacher that counts as genuine education, but the creation of desires which shall become at length spontaneous and which shall express themselves in supplementary reading and research arising from a genuine devotion to a subject. This sort of initiative is now so rare among students in our American universities that I well remember the surprise I felt a few years ago when, in a certain class in elementary psychology, a student actually volunteered information upon the lesson of the day, derived from the voluntary reading of unassigned texts! It is the function of the library to invite this sort of initiative. And it is the

Dr. Jau William Hudson

business of the instructor so to articulate teaching with library research that the student will utilize its manifold opportunities without specific direction and as a matter of course. I am persuaded that the chief reason for the lack of this sort of initiative rests not so much with the student as with the instructor, who should create so conscious a relation between his courses and the library that the pertinent books shall be easily accessible and the pedagogical inducements to use them compelling.

Another great need in present day education is the organizing by the student of his separate courses into some semblance of a connected curriculum. The variety of courses in the modern university, together with the freedom of the elective system, has too much tended to make a student's education a mere atomistic aggregate of discrete courses rather than a rational whole. Even where the student pursues subjects more or less related, as required by the majoring and minoring systems of most American universities, they do not really articulate these subjects so successfully as they should. Here, again, we educators ourselves are largely responsible. In most of our universities there is no machinery by which a student is required to think of his various studies in terms of an organized mastery of them, except, possibly, in the vocational schools. In these, the incentive is obvious, but where is there such an incentive in what is usually known as the College of Liberal Arts? Too often the student is led, at the conclusion of a course, thru our lack of curriculum-thinking, to throw away his notebooks, sell his text, and exclaim with triumph, "Thank God, I'm thru with that!" And the worst of it is he *is* thru with it, as it is thru with him.

This ideal of organization in the student's education cannot be achieved successfully unless the student has learned to fill in the gaps between his separate courses by a judicious use of the university library. There are many ways of encouraging this. One way, that has given rise to some favorable discussion, is to provide for an examination at the close of the senior year on the courses that make up the student's major work, with the aim of determining how far the student has succeeded in mastering the fundamentals of the field he was supposed to cover and how far he has achieved a rational synthesis and interrelation. The question of ways and means, however, is still a question for serious discussion. The main point is that the student should be encouraged in some way or other so to organize his work that he shall perforce read, as generously as his time will permit, unassigned books that will aid him to gain a total survey of the field of his major studies. Once more, this means a more conscious relation to the functions of the university library than the average instructor has yet attained.

Closely related to the obvious need of initiative and organization in the modern student's work is the need of so regarding his education that many of the studies begun in college shall be continued be-

yond Commencement Day. How common it is to find that the American student, after graduation, has forever laid aside vital interests awakened during his college course! All of us have known of students — indeed, most of us would probably find ourselves among the number — who have gained, say, a good reading knowledge of Greek or Latin literature, or a quite respectable mastery of the fundamental problems of economics or philosophy, but who have never seriously read a single book in these subjects after the benediction at the Commencement exercises. Can university education be truly said to be a success under such circumstances? Now, of course, it would be fatuous to say that the university library has the responsibility of curing such a fundamental defect in the spirit of our educational process. Yet, one can say with truth that if the student, during his college course, learns to read for himself outside of the routine requirements of the class room, he will be more likely, thru the acquirement of such a habit, to continue such reading when his college days are over. I have not the time now to discuss the changes necessary in our conception of education to make it probable that the student will achieve such habits of independent reading. I only know that such habits should be fostered, or our higher education is largely in vain. Again, this means a much closer relation to the university library on the part of both student and instructor.

But nothing of all this can be rightly achieved by cut-and-dried methods of pedagogy or by the machinery of rules passed by faculties or enjoined by the policies of administrators. I have seen faculties of large universities become so engrossed in the making of rules that the larger purposes and aims of education were lost in the clamorous click of the machinery of methods which have lost the life of the very ideals which they were genuinely meant to serve. It has even come to pass that often "mere ideals" are sneered at as so impalpable and indefinite that it is hardly worth while for a faculty to discuss them, in comparison with amendments to by-laws and modifications of grading systems, valuable as such considerations are. And yet, in the last resort, indeed, in the first resort, all education worth while is thru the contagion of virile, ever conscious, and growingly pervasive ideals. All the needs that I have mentioned — initiative, organization, continuity — are possible only thru the contagion of *constructive ideals*, communicated by instructors to students and by students to each other. Such conscious educational ideals comprise the only true college "spirit". I cannot teach philosophy successfully merely by compelling the student to become erudite in the great philosophic systems of history. These systems, to be understood from within, that is, vitally, must be taught in terms of the living ideal, which the student shall adopt as his very own, of the glory and the worth of what it is to be a philosopher. One cannot teach English composition merely thru enjoining the rules of grammar and of rhetoric. Indeed, it is a human impossibility to teach mere grammar and rhetoric to any student

who is worth while. Nobody cares anything about mere grammar and rhetoric, unless he be an undesirable pedant, and so a still more undesirable citizen. No; the only way successfully to teach the writing of English is to create in the student a genuine love for the great masterpieces of English literature, so that, by contagion of these masters, he shall long to express himself in language as near worthy of them as his ability can achieve. This, of course, will mean that he will study grammar and rhetoric, but grammar and rhetoric will be infused with life and meaning, transfigured from the dead, inert and burdensome baggage of a persecuted wanderer in the valley of the shadow to the means of a spirit finding its utterance and so finding itself.

Now, where shall the student find the contagion of such ideals? First of all he must find them in his instructor. They must be found there, or education is a mockery. Then, thru the inspiration of his instructor, he shall find the contagion of such ideals thru communion with the great masters of thought who perpetually dwell within the walls of the university library. This is not merely a Place of Books; it is a Place of Visions. Here, shall the students learn to know the masters face to face and soul to soul — to see them and feel them as concrete, pulsating lives which shall give new significance to the difficulty of every task and the forbidding hardness of every climb toward knowledge.

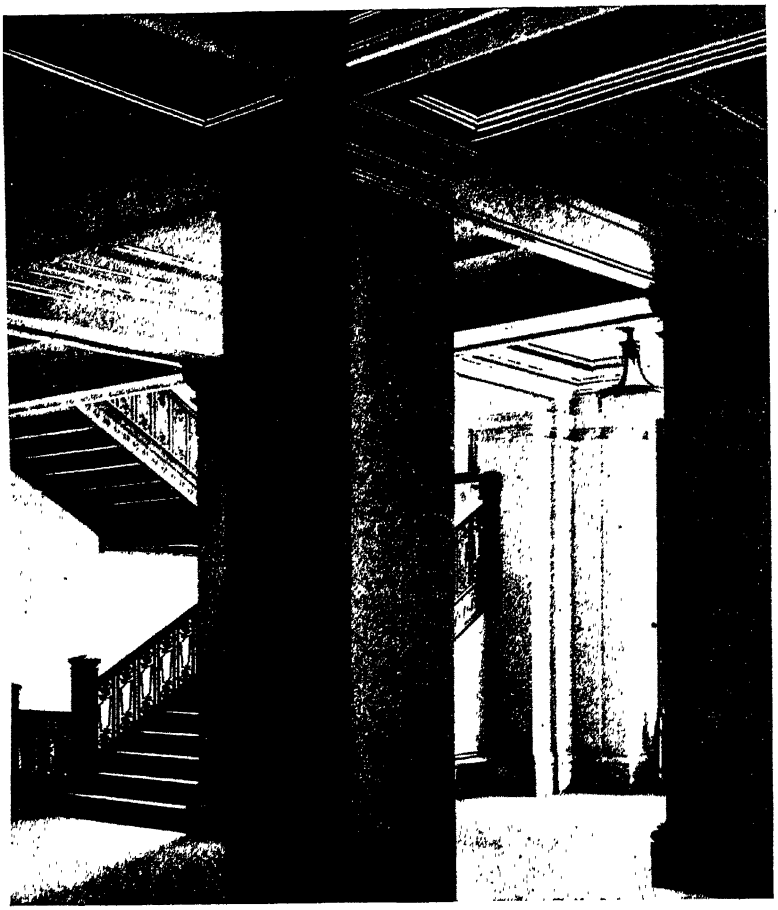
Thus it is that the normal growth of the modern university, as well as the growth that is to be, thru the fulfillment of new needs and of new ideals, has made the library not a mere adjunct but an integral and vital part of the process of education. The library of the modern university is not a mere department of the university, but it is the synthesis of all departments. Within these walls is housed the university's perpetual faculty, the masters of the sciences and humanities of all ages, the faculty to which we whose names appear in the annual catalog are but assistants. Who comprise the real faculty of the University of Missouri? Homer, Plato, Aristotle, Vergil, Dante, Bacon, Göethe, Von Humboldt, Shakespeare, Wordsworth, Darwin, and the remainder of the host of the "masters of those who know". Here is a faculty forever accessible to students, winter and summer. Here is to be found the true and perpetual exchange of professors. All countries and all times, from the first university to the last, have sent them here. Here is a faculty that asks no raise in salary; receives no harassing "calls"; who worry not over grading systems — happy immortals they! Here are the true teachers, for they give nothing save as the student gives of his diligence and his ideals. Here, culture knows no national boundaries, no castes, no clans. Here is the beginning of that new internationalism to which a world in conflict shall come at last. Here is the great world-parliament, of which the dreamers have prophesied. Here is democracy triumphant, for here is gathered the world's best society, with no qualifications for

Henry Ormal Severance, Librarian

entrance save the ability and purpose of those who aspire to it. Justin Windsor once suggested that "had we instruments delicate enough to register them we might yet hear the footfalls of Plato walking in the Academy; the denunciation of Brutus on the Rostrum; the prayer of Columbus at San Salvador; the periods of Garrick at Drury Lane; the calm judgments of Washington in the federal convention". But, wonderful as such records would be, the library is stored with records infinitely more significant than these merely outward expressions of the human spirit. We cannot hear the footfalls of Plato; but we can read his innermost thought in his printed dialogues. We cannot listen to the denunciation of Brutus; but we can read his meaning in the unfolding drama of Rome's story. We cannot thrill with the periods of Garrick at Drury Lane; but the race can forever marvel over the lines that made Garrick great. We cannot listen to Washington in the Federal convention; but the thoughts he uttered, the ideals he formulated are here, forever accessible to those who, as future citizens, will incorporate the best of his dream into the building of the mightier state.

This library is the realization of the hopes of three-quarters of a century. From the administration of President Lathrop, nearly every president of the University has been aware of the increasing importance of an efficient library and has labored to achieve it. The obstacles have been great and the consummation has been slow. Up to the time of the Civil War the sum of not more than $2500 was spent on books. It is interesting to note that during the Civil War the Federal troops were housed in the University building and that the library room was used as a guardroom. Now, it is evident that these soldiers were discriminating in matters relating to true culture, for "a considerable number of books disappeared"— went when the soldiers went. Who says that war and culture do not go together! Then in 1892, when the library had amassed some 23,000 volumes, the main building of the University burned and, with the exception of the few hundred books loaned out, the entire library was destroyed. Yet today, thru the devoted and energetic labors of those in whose hands the responsibility for the University's development has been placed, the library is one of the best in this section of the country, numbering 150,000 volumes. This achievement we owe not only to those who have efficiently administered University affairs in the office of President, but to the farseeing ideals of the Board of Curators, to the support of the Legislature, to the co-operation of the Historical Society, and to the devotion of the people of Missouri.

There are at least three requisites for a good university library building, requisites which this library happily fulfills. A library should be accessible to all departments of the university; this library is fortunately situated in the very heart of the University's life. A library should be spacious; in this reading room alone where we are gathered today there is desk space for 260 students. Besides this are



Exhibition Corridor and East Stairway

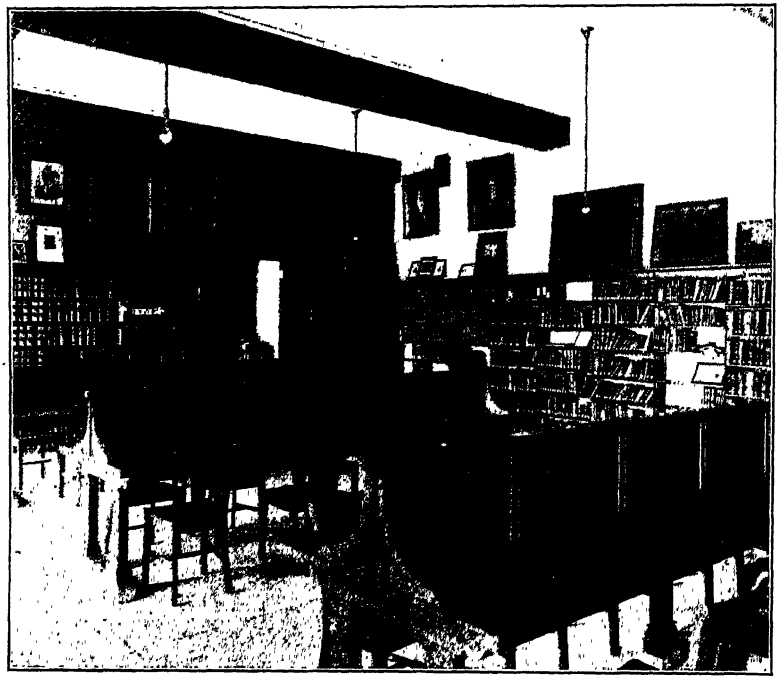
the long needed seminary rooms. Both these and space for readers will be increased as the University grows. And, finally, a library should be attractive — its portals should ever tempt one to enter; in many ways this library is the most attractive building that the University possesses.

Thus, the opening of this library marks a new and significant epoch in the development of the greater University of Missouri. Succeeding generations of faculties and students will realize this more fully than we of today can. It is possible that among all the encouraging achievements of President Hill's administration the realization of this building will be longest remembered and cherished. For the erection of this library is significant far beyond the event itself. Situated on a rise of ground higher than either of our campuses, it marks a linking of the old with the new. Up to now, there was a West Campus and an East Campus; hereafter there is really only one campus, of which the library is the center.

It will come to pass that a great university will increasingly be judged by the nature and use of its library. Not by the number of its volumes; not by the magnificance of its building; but by the books of power which it houses and by the manner in which the faculty encourages their abundant and judicial use. We intend this library to develop in such significant ways that it shall serve to invite scholars here and to draw serious minded students here. We intend this library to fulfill the paramount purpose of a great university library; the double purpose of exact scholarship and creative research, the research that finds truth, and the still greater research that leads the student to find himself.

As the University grows in its influence thruout the state, this library will become in many senses not merely the center of the University, but the intellectual center of Missouri. Under its roof are to be found not only the books of the University, but the valuable records of the Historical Society, which has worked hand in hand with the University for the realization of this building. Upon the seal of the University is to be found the motto, "*Salus Populi*", "the welfare of the people". It is for the service of this broad purpose that the University exists and it is to the uses of this service that this library is today formally opened, since we know full well that upon the knowledge and wisdom which its books represent, and the ideals which they stimulate in the future citizens of Missouri, the welfare of this commonwealth in some measure depends.

At the present time this building is incomplete, and we all look forward to the day when the people of Missouri will make actual the vision we have of the finished structure. And yet, in the most significant sense of all, a university library is always incomplete. It is a suggestion of the future even more than a record of the past. The best books are yet to be written; and what books these shall be depends to some extent upon the sort of thinkers this University creates



Reading Room of the Missouri State Historical Society

thru just such opportunities as this building presents — thinkers to some of whom we shall look to take their rightful places beside the masters who dwell within this House of Books.

At the close of Dr. Hudson's address, the President called upon Mr. O. H. Swearingen of Kansas City to speak. Mr. Swearingen was a member of the legislative committee which secured the money for the buildings of the East Campus, the Physics, Chemistry and Biology buildings, and he was chairman of the committee of the House which purchased this site and erected this part of the building. He spoke in part as follows:

This is indeed a great event. I would not be possessed of the ordinary sentiments that move men, did I not greatly appreciate the honor of being asked to participate even in this small way, in the ceremonies of this auspicious occasion. Whatever in my humble way I may have done to aid you, to aid the University, to aid the Historical Society in the consummation of their wish, in the realization of their dream, an adequate building to house this great library, I did without hope of favor or reward, simply as a matter of state pride. My present wish is that the Legislature may soon decide to complete your original plans. We must have buildings and equipment for all our institutions commensurate with the resources of this state and with its dignity and standing among the other members of the Union."

William R. Painter, Lieutenant Governor of Missouri, representing the State Historical Society, was next introduced by the President, who said: "Of all the state officers who have been interested in the construction of this building, and interested for many years in having a building secured here for the University and State Historical Society, I think we could very well place Lieutenant-Governor Painter at the top of the list." Mr. Painter said in part as follows:

I am here today to represent in a way the State Historical Society, of which I have been a member since its organization in 1898, when at Kansas City a committee was appointed by the Missouri Press Association to preserve in some way the History of Missouri.

The Missouri Press Association, representing practically all of the newspapers in the state, thought the time was ripe for us to begin to

preserve the history of this great state and to gather the books and the pamphlets, the messages and the letters and the pictures that had been made in the centuries past, and so this organization came about. At the meeting in Excelsior Springs in the same year the organization was perfected, and Mr. E. W. Stephens of this city was elected president and Professor Loeb was elected secretary. Without money, without any library, without any books, they began work, and we have in these few years accumulated as you know the books, pamphlets and newspapers that are kept in the Historical Society rooms.

The state soon recognized the State Historical Society and made an appropriation for its support. About that time Mr. Sampson was elected secretary of the organization, and he brought to it a library that he had been years in gathering, pamphlets and books that are invaluable. We could not secure in any way possible duplicates of the books that he brought to the State Historical Society. He served as secretary for many years, gathering here and there those pamphlets and books that were rare indeed, and being very familiar with all of these things from his study of them for years he knew where to locate and find and purchase things that would have been lost to the people of this state. Too much credit can not be given to him for that great work in which he engaged. And yet he is interested in trying to secure the things that are of interest and will be of more interest to the people of the state. And I think the thanks not only of the Historical Society, which have been given to him, but I think the thanks of this great University; not only that, the thanks of the people of the entire state of Missouri should be given to him for this great work in which he has been engaged.

The Historical Society has had only a few presidents and only three secretaries. Mr. E. W. Stephens was the first president; Mr. H. E. Robinson of Maryville was the second president; Mr. W. O. L. Jewett of Shelbina was the third; Mr. Southern of Independence was the fourth, and the present president of the association is Mr. R. M. White of Mexico, Missouri. The secretary of the association is Mr. Shoemaker, with whom you are all well acquainted. I predict for the gentlemen who now have the matter in charge that the Historical Society will continue to grow, continue to become of more interest than it has ever been in the state. Since it is now housed in this beautiful building with its spacious reading room and its books and pamphlets so that they may be obtained easily by those who desire to study the history of the state, it seems to me that the room below will soon be too small for the purpose for which it was intended.

Mr. Charles E. Rush, librarian of the Free Public Library of St. Joseph, representing the Missouri State Library Association was the last speaker. He said:

The Missouri Library Association, representing the interests of nearly all of the college, public and university libraries thruout the state of Missouri, desires to offer felicitations on the dedication of this admirable new library building and in this official way extends congratulations to all those who have been charged with its construction and management, all those who have contributed to its erection and all those who shall become beneficiaries of its state and nation-wide service.

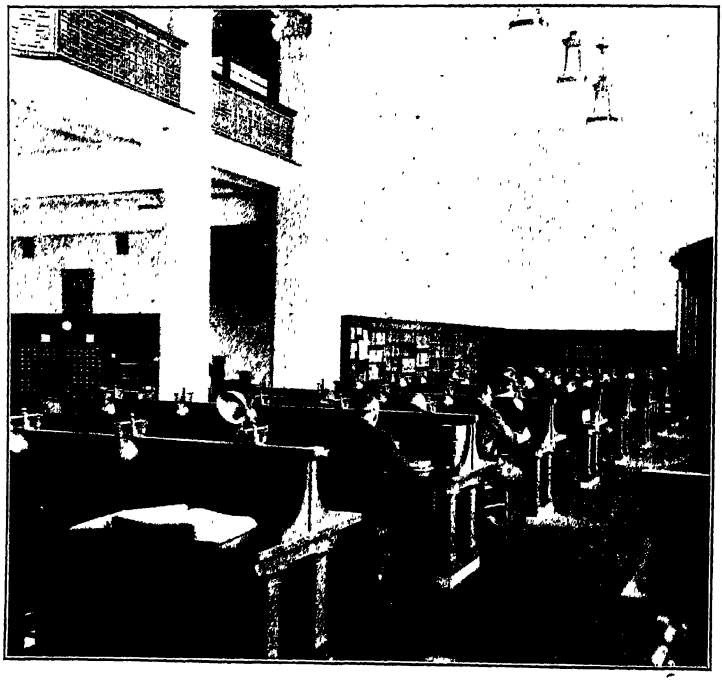
Today the professional interest and best wishes of all Missouri librarians are centered upon this important and memorable event, which places the great state of Missouri in the front rank of sister states having the best and most efficient type of university library equipment.

This new building has that delightful air of bookish democracy and collegiate atmosphere which has lately become almost a lost art among university library architects, wherein all students feel welcome and comfortable, appealing to those who read by precept and assignment as well as those who read for the pure enjoyment of good reading. Furthermore, it is so constructed and arranged that it serves to emphasize the fact that upon use its contents become gifts finer and more wonderful than pure gold, that the wealth of brain, the value of experience and the power of inspiration stored herein will enrich the whole of life for all, while gold can only enrich the purse of the few.

May the entire state be not unmindful nor unappreciative of the "acts of faith" with which this great library has been founded, supported and housed, and may its confidence in the wise direction and educational administration of the library be not lessened but grow apace with the extension of library activities and service.

As pointed out by one of our famous present-day librarians, Dr. E. C. Richardson of Princeton University, the modern university library has become an indispensable teaching institution, having a far greater function than that of merely collecting and handing down to future generations the literature of modern times and of ages past. "It is above all things a teacher of the present generation," having become so "by its very existence as a separate organization, by its books, by its exhibition and laboratory facilities, and by its staff of library assistants".

Such a recognition of its importance and place in the sun of educational efforts has rightly led to the creation of this beautiful building, housing sufficient wisdom to free the shackles of all who are held in intellectual bondage thruout the commonwealth. Upon all who shall learn of better things in this great institution will be laid the



Main Reading Room—Looking east

blessed burden of disseminating to others the means of making this old world a happier and better place in which to live and to the end that they may realize life's great purpose that all shall so fit themselves that the opportunity of service may find seedbed and root and prosper accordingly, this building is today dedicated. May they not forget that, in this age of preparedness and in this time of "keep your powder dry", it is of supreme importance to neglect not the enlargement of the armament of the brain and the development of the aerial forces of the soul, "for what shall it profit a man if he shall gain the whole world and lose his own soul"? It was one of our great presidents who said: "I will study and get ready, for sometime my chance will come."

Shall we not on this impressive occasion recall again the words of another great student whose prophesy, "behind us lies endless power, before us awaits endless possibilities, and all about us are endless opportunities", is in a happy way applicable to this splendid library of the University of Missouri.

The President said in conclusion:

This building in its plans is really the result of a great deal of study. Mr. Severance, the librarian, was at work on it for a long time, canvassed the entire country, secured the opinions of all the experts and then formulated his plans. Mr. Jamieson, the architect, was able to take these suggestions and put them together and adapt them to the money and the site and the general situation; and I think we can join in our gratitude to Mr. Severance and Mr. Jamieson for the sort of building we have secured thus far. I trust that we shall not forget that Mr. Jamieson must complete the building, that we must not get another architect to build the wings. The greatest apprehension I have is that by some accident we may have another architect to re-place the rest of the building.

Furthermore, the administration of the library is quite as important as getting the building, and I can say frankly to visitors that I have the testimony of our graduates who go elsewhere, to large universities like Columbia and Harvard with their great libraries, that nowhere have they found such facilities for getting at the materials as they have found in the University of Missouri; so that I judge the administration of the building and of the Library itself is such as to give satisfaction to all of us and enable us to look forward with confidence to the fullest possible effective use being made of this building and of the books that are housed here.

The University of Missouri library and the State Historical Society library are both housed here now and I trust will always continue to be housed together. My attention was called today to the fact that in another state these two institutions are united in one building and that each proceeds with its work without thought of the other, with the result that a great deal of money is wasted. No money is wasted here for not a dollar that the State Historical Society spends for books is duplicated in the expenditures of the University library, and *vice versa*, so that we have here a most complete and cordial cooperation. The University has had the expression of gratitude from the State Historical Society for the generosity shown in the amount of space given to that society, and in return the University wishes to express its gratitude that the material under the administration of the State Historical Society is here for the use of our students.

I now declare the University of Missouri Library Building open for use.

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 18 NUMBER 4

LIBRARY SERIES 9

CHECK LIST OF THE OFFICIAL SERIAL PUBLICATIONS OF THE UNIVERSITY

COVERING THE YEARS 1914, 1915, 1916

SUPPLEMENT TO BULLETIN 6

UNIVERSITY OF MISSOURI
COLUMBIA, MISSOURI
FEBRUARY 16, 1917

THE UNIVERSITY OF MISSOURI STUDIES*

SOCIAL SCIENCE SERIES

VOLUME 3

1. Assyrian historiography. A source study by Albert Ten Eyck Olmstead, Ph. D., associate professor of ancient history, viii, 66p. 1916. $1.00.

THE UNIVERSITY OF MISSOURI BULLETIN

GENERAL SERIES

VOLUME 15, 1914

1. January. Announcement of the Graduate school, 1914-15. 55p.
2. February. Announcement of the Summer session, 1914. 44p.
3. April Catalogue 1913-14. 464p.
4. May. Announcement of the School of education. 1914-15. 51p.
5. May. Announcement of the School of commerce. 1914-15. 20p.
6. May. Announcement of the School of engineering. 1914-15. 48p.
7. June. Announcement of the School of medicine. 1914-15. 34p.
8. July. Announcement of the College of agriculture (Regular Ses.) 1914-15. 62p.
9. July. Announcement of the School of law. 1914-15. 29p.
10. Aug. Announcement of the School of journalism. 1914-15. 17p.
11. Sept. Announcement of the Two-year winter course and other short courses, College of Agriculture, 1914-15. 43p.
12. Dec. University of Missouri Month by Month. 1915.

VOLUME 16, 1915

1. January. Announcement of the Graduate school. 1915-16. 64p.
2. February. Announcement of the Summer session. 1915. 43p.
3. March. Catalogue. 1914-15. 539p.
4. March. Announcement School of engineering. 1915-16. 45p.
5. April. Announcement of the School of journalism. 1915-16. 23p.
6. May. Announcement of the School of commerce. 1915-16. 22p.
7. May. Announcement of the School of law. 1915-16. 36p.
8. June. Announcement of the School of education. 1915-16. 36p.

*This list of publications is a continuation of the list published in 1914. University of Missouri Bulletin. Library Series 6.

9. June. Announcement of the School of Medicine. 1915-16. 61p.
10. July. Announcement of the College of agriculture. 1915-16. 17p.
11. September. Announcement of Two-year winter course and other short courses, Agriculture. 1915-16. 50p.
12. October. Announcement of the Graduate school. 1916-17. 68p.

VOLUME 17, 1916

1. February. Announcement of the Summer session. 1916. 54p.
2. May. Announcement of the School of journalism. 1916-17. 22p.
3. April. Catalogue. 1915-16. 531p.
4. June. Announcement of the School of engineering. 1916-17. 34p.
5. June. Announcement of the School of law. 1916-17. 25p.
6. July. Announcement of the College of agriculture. 1916-17. 43p.
7. August. Announcement of the School of medicine. 1916-17. 23p
8. August. Announcement of the two-year winter course and other short courses. 1916-17. 50p.

ASTRONOMICAL SERIES

17. The antalogol variable St. Ophiuchi (52. 1907).
18. The Algol variable Rx Draconis (121.1906).
19. The Algol variable Rz Draconis (26.1907).
20. Studies with the polarizing photometer.
21. The rotating ellipsoid Ru Camelopardalis.
22. The visual and photographic light variations of R R Lyrae by C. C. Kiess.
23. The visual and photographic light variations of Rt Aurigae by C. C. Kiess.
24. Investigations in Extra focal photometry by R. H. Baker and Edith E. Cummings.

EDUCATION SERIES

7. Circular of information to accredited schools, sixth edition, revised. Issued by the committee on accredited schools, University of Missouri. (Out of print).
8. The kind of scholarship records to be kept in schools, by Max F. Meyer, Professor of experimental psychology.
9. A course in grammar based on the mistakes made by school children in Kansas City, Missouri, by W. W. Charters, Dean of the faculty of education, and Professor of theory of teaching, University of Missouri, and Edith Miller, teacher of English, Soldan high school, St. Louis, Mo.
10. Circular of information to accredited schools, seventh edition, revised. Issued by the committee on accredited schools, University of Missouri.

11. A study of the rural schools of Saline County, Missouri, by Joseph Doliver Elliff, Professor of high school administration and high school visitor, University of Missouri, and Abner Jones, Fellow in education, University of Missouri.

ENGINEERING EXPERIMENT STATION SERIES

VOLUME 5, 1914-16

14. Effects of heat on Missouri granites by W. A. Tarr and L. N. Neuman.
15. A preliminary study relating to water resources of Missouri by T. J. Rodhouse.
16. The economics of electric cooking by P. W. Gumaer.
17. Earth roads and oiling of roads by H. A. LaRue.
18. Heat transmission through boiler tubes by Edwin Allen Fessenden and J. William Haney. 1916. 74p.

EXTENSION SERIES

Edited by Charles H. Williams.

1. April, 1913. A new departure for University extension. 4p.
2. July, 1913. School improvement agencies. Suggestions for superintendents and principals by W. W. Charters. 15p.
3. October, 1913. Consolidation of schools of Missouri by R. H. Emberson. 20p.
4. November, 1913. Correspondence courses in high school subjects. 8p.
5. December, 1913. Announcement of the extension division.
6. Preservation of food in the home by Louise Stanley and May E. DcDonald, 1914.
7. Care of free text-books by Henry O. Severance, 1914.
8. Announcement of the extension division, 1914-15.
9. Abnormal and defective children by W. H. Pyle, 1914
10. Correspondence courses in high school subjects. 1914.
11. House fly by M. P. Ravenel, 1914.
12. Correspondence courses in high school subjects, 1915.
13. Announcement of the Extension division, 1915-16.
14. Technical manual arts for general educational purposes by Ira S. Griffith, 1916.
15. Country roads. Part 1. Road drainage; Part 2. Culverts by F. P. Spalding. 1916.
16. Handwork in grades 1 to 6 by Ella V. Dobbs and Juliaetta Zeits.
17. Not published.
18. Not published.

19. Correspondence courses in high school subjects, 1916.
20. Announcement of the extension division, 1916-17.
21. Manual of mental and physical examinations. 1916.
22. Better highways by E. J. McCaustland.

JOURNALISM SERIES

5. May, 1913. Journalism week, 1913. 63p.
6. Building a circulation: Methods and ideals for small-town newspapers by J. B. Powell, instructor in advertising.
7. The editorial page, by Robert S. Mann, assistant in journalism.
8. Journalism week, 1914. (Out of print.)
9. The world's journalism by Walter Williams, dean of the School of Journalism.
10. Newspaper efficiency in the small town, by J. B. Powell, instructor in advertising.
11. Journalism week, 1915.
12. Deskbook of the school of Journalism, edited by Charles G. Ross, associate professor of journalism.
13. The journalist's library: Books for reference and reading, by Charles E. Kane, assistant in journalism.
14. Making the printed picture: A treatise on photoengraving methods, by Herbert W. Smith, instructor in illustrative art.

LAW SERIES

Published Four Times a Year

1. Estates Tail in Missouri, by Manley O. Hudson, Professor of Law. (Out of print.)
2. Estates By The Martial Right And By The Curtesy In Missouri, by Charles K. Burdick, Professor of Law.
3. The Rule Against Perpetuities In Missouri, by Manley O. Hudson, Professor of Law. (Out of print.)
4. The Real Party In Interest Statute In Missouri, by George L. Clark, Professor of Law.
   Limitations Of Personal Property, by Manley O. Hudson, Professor of Law.
5. Conditions Subsequent In Conveyances In Missouri, by Manley O. Hudson, Professor of Law.
6. The Writ of Certiorari in Missouri, by J. P. McBaine, Professor of Law.
7. Tort Liability For Negligence in Missouri.—I. The Duty To Use Care, by George L. Clark, Professor of Law.
8. Land Tenure And Conveyances In Missouri, by Manley O. Hudson, Professor of Law; Index to Law Series, 1-8.

9. Preliminary Stock Subscription Agreements In Missouri, by Manley O. Hudson, Professor of Law.
10. Some Aspects Of The Status Of Children In Missouri, by Eldon R. James, Professor of Law.
11. Executory Limitations of Property In Missouri, by Manley O. Hudson, Professor of Law.
12. Tort Liability For Negligence In Missouri.—II. Legal Or Proximate Cause.—III. Contributory Misconduct of the Plaintiff, by George L. Clark, Professor of law.
13. The Proposed Regulation of Missouri Procedure by Rules of Court, by Manley O. Hudson, Professor of Law.
    Certiorari from the Missouri Supreme Court to the Courts of Appeals, by J. P. McBaine, Professor of Law.

LIBRARY SERIES

VOLUME 2

1. July, 1912. Partial bibliography and index of the publications of the College of Agriculture and the Agricultural experiment station. 19p.
2. January, 1914. Check list of the official serial publications of the University. 44p. (Out of print.)
3. Whole No. 7. A Library Primer for Missouri high schools. 20p. 1915. (Out of print.)
4. Whole No. 8. Opening exercises of the new library building. Jan. 6, 1916. 22p. 1916.
5. Whole No. 9. Check list of the official serial publications of the University 1914, 1915, 1916.

MEDICAL SERIES

1. Bacteria and disease, by O. W. H. Mitchell, Associate Professor of Pathology and Bacteriology.
2. Prevention of typhoid fever, by W. J. Calvert, professor of preventive medicine.
3. Prevention of contagious diseases in school children, by W. J. Calvert.
4. On Resuscitation, by D. H. Dolley, Professor of pathology.
5. The relation of sight and hearing to early school life by Guy L. Noyes, Acting dean of the faculty of medicine and formerly Professor of diseases of the eye and ear.
6. The prevention of tuberculosis, by O. W. H. Mitchell.
7. Water—the prevention of its pollution, by O. W. H. Mitchell.
8. Preventive medicine, its accomplishments and its aims, by M. P. Ravenel, Professor of medical bacteriology and preventive medicine.

9. The early diagnosis and treatment of cancer, by F. A. Martin, instructor in pathology.
10. The prevention of malaria, by Elbert L. Spence, instructor in preventive medicine and medical bacteriology.
11. Headache A symptom: its causes, prevention and cure, by Walden E. Muns, instructor in pathology.

SCIENCE SERIES

VOLUME 2.

1. The implantation of the glochidium on the fish, by Daisy Young, assistant in zoology. 22p, plates 3. 1911. 50 cents.
2. Notes on the Ohio shales and their faunas, by E. B. Branson, Professor of geology. 16p. plates 3. 1911. 50 cents.
3. The blonde race and the Aryan culture, by Thorstein B. Veblen. 19p. 1913. 25 cents.
4. The Devonian fishes of Missouri by E. B. Branson. 1914. 25 cents.

SOCIAL SCIENCE SERIES

VOLUME 1

1. The loan office experiment in Missouri, 1821-1836 by Albert J. McCulloch, 13p. 1914. 25 cents.
2. The Monroe doctrine—its origin, development, and recent interpretation, by Frank Fletcher Stephens. 26p. 1916.

AGRICULTURAL EXPERIMENT STATION

STATION BULLETINS

VOLUME 6

105—118

July, 1912—May, 1914

116. Inspection of commercial fertilizers, 1913.
117. Report of the secretary for the year ending June 30, 1913.
118. Drainage investigation on the north east prairie. First report.

VOLUME 7

119—131

October, 1914—April, 1915

119. Soil investigation.—Jasper County experiment field.
120. Rations for breeding ewes.
121. Land tenure.
122. Inspection of commercial fertilizers for the year, 1914.
123. Experiments with farm crops in southwest Missouri.
124. Profits from spraying twenty-five Missouri orchards in 1914.
125. The cost of production on Missouri farms.
126. Soil experiment on the level prairies of northeast Missouri.
127. Soil experiments on the dark prairies of central and northeast Missouri.
128. Soil experiments on the rolling glacial land of southwest Missouri.
129. Soil experiments on the red limestone upland of southwest Missouri.
130. Soil experiments on the gray prairie of southwest Missouri, (second report.)
131. Work and progress of the Agricultural Experiment station for the year ending June 30, 1914.

VOLUME 8

132—142

April, 1915—June, 1916

132. The control of the San Jose scale in Missouri.
133. The silo and its use.
134. Insect pests of field crops.
135. The ration and age of calving as factors influencing the growth and dairy qualities of cows.

136. Feeding wheat to fattening swine.
137. The periodical cicada in Missouri.
138. Farm bee-keeping.
139. Inspection of commercial fertilizers: 1915.
140. Size of farm business.
141. Work and progress of the Agricultural Experiment Station for the year ended June 30, 1915.
142. Successful farm organization.

RESEARCH BULLETINS

VOLUME 2

4—14

October, 1911—May, 1914

4. Digestion trial with two Jersey Cows, in full ration and on maintenance.
5. Maintenance trials with five Jersey cows.
6. The distribution of farm labor.
7. Nutrients required for milk production.
8. The killing of plant tissue by low temperature.
9. Carotin—the principal natural yellow pigment of milk fat Part 1.
10. Carotin—the principal natural yellow pigment of milk fat Part 2.
11. Carotin—the principal natural yellow pigment of milk fat Part 3.
12. Carotin—the principal natural yellow pigment of milk fat—Part 4.
13. Lactochrome—The yellow pigment of milk whey.
14. Sap studies with horticultural plants.

VOLUME 3

15—24

July, 1914—June, 1916

15. An experimental study of the rest period in plants. The summer rest of bulbs and herbaceous perennials. Second report.
16. An experimental study of the rest period in plants. Pot grown woody plants. Third report.
17. An experimental study of the rest period in plants. Seeds. Fourth report.
18. The maintenance requirement of cattle as influenced by condition, plane of nutrition, age, season, time on maintenance, type, and size of animal.
19. Studies of the timothy plant. Part 1.
20. Studies of the timothy plant. Part 2.
21. An experimental study of the rest period in plants. Physiological changes accompanying breaking of the rest period. Fifth report.

22. Silage investigations. Normal temperatures and some factors influencing the quality of silage.
23. The powdery mildews of avena and triticum.
24. Influence of plane of nutrition of the cow upon the composition and properties of milk and butter fat. Influence of overfeeding.

VOLUME 4

25—

July 1, 1914—

25. Influence of plane of nutrition of the cow upon the composition and property of milk and butter fat. Influence of underfeeding.
26. The nutrients required to develop the bovine fetus.

AGRICULTURAL EXPERIMENT STATION CIRCULARS

VOLUME 1

1—68

67. How to build a Gurler silo.
68. The seeding of meadows and pastures.

VOLUME 2

69—81

April, 1914—June, 1916

69. The fertility of the soil.
70. The Hessian fly in Missouri.
71. Shock corn for silage.
72. Silage for horses and mules.
73. Rye and blue grass pasture for ewes.
74. The yellow color in cream and butter.
75. The farmers' poultry house.
76. Feeding for egg production.
77. The value of education to the farmer.
78. The control of soil washing.
79. Sour milk for chicken feeding.
80. The Missouri poultry house.
81. Pruning shade trees.

THE UNIVERSITY OF MISSOURI BULLETIN

Volume 15

Issued Three Times Monthly

LIBRARY SERIES

edited by

HENRY ORMAL SEVERANCE

VOLUME 1

1. Annual report of the librarian, 1907.
2. List of periodicals currently received by the libraries, 1910.
3. Handbook of the libraries, 1910. (Out of print.)
4. Books for farmers and farmers' wives, April, 1912.

VOLUME 2

1. Partial bibliography and index of the publications of the College of Agriculture and the Agricultural Experiment Station, July, 1912.
2. Check list of the official serial publications of the University, 1913.
3. Whole No. 7. A Library Primer for Missouri high schools. 20p. 1915. (Out of print.)
4. Whole No. 8. Opening exercises of the new library building. Jan. 6, 1916. 22p. 1916.
5. Whole No. 9. Check list of the official serial publications of the University 1914, 1915, 1916.

The University of Missouri Bulletin—issued three times monthly; entered as second class matter at the postoffice, Columbia, Missouri

500

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 22, NUMBER 10

LIBRARY SERIES
No. 10

CHECK LIST OF THE OFFICIAL SERIAL PUBLICATIONS OF THE UNIVERSITY

Edition 2

ISSUED THREE TIMES MONTHLY; ENTERED AS SECOND-CLASS MATTER AT THE POSTOFFICE AT COLUMBIA, MISSOURI—500

APRIL, 1921

CONTENTS

Page

Preface 3

University of Missouri Studies 5
- Literature and Linguistic series 6
- Mathematical series 6
- Philosophy and education series 6
- Science series 6
- Social science series 7

The University of Missouri Bulletin 8
- General series 8
- Astronomical series 17
- Education series 18
- Engineering series 20
- Extension series 21
- Journalism series 22
- Law series 23
- Library series 25
- Literature series 25
- Medical series 26
- Rural education series 26
- Science series 27
- Social science series 28

College of agriculture & agricultural experiment station publications
- Farm bulletin 29
- Bulletins 31
- Circulars 38
- Research bulletins 41
- Extension circulars 43

School of mines publications 45

Index 49

PREFACE

The purpose of the second edition of this check list is to make available the valuable material being published by the University and to record in permanent form the serial publications of the University up to and including 1920.

The first edition of the check list is out of print, and it is assumed that most libraries have copies. The information contained in the appendix of that list is not reprinted, but the titles in the supplement to the check list published in 1917 and all other serial publications issued previous to January 1, 1921, have been included.

A new feature of this check list is the general index of subjects and authors appearing in the publications. The publications have now become so numerous, that an index will prove very helpful in locating bulletins, circulars, studies, and the like.

The general series of the bulletins have not been indexed. This series is devoted to announcements of the courses in the several colleges and schools and contains nothing of a scientific or learned nature. The catalogs of the University have been published as bulletins since 1900. The report of the Board of Curators remains a separate biennial publication. It was annual 1840-48. Since that time it has been biennial.

Unless otherwise stated copies of the various publications in print may be secured by addressing the librarian of the University.

HENRY ORMAL SEVERANCE.

THE UNIVERSITY OF MISSOURI STUDIES

Edited by George Lefevre 1913—

The Studies are devoted to the publication of extensive papers embodying the results of original research made by members of the faculty and by graduate students. No paper that has appeared elsewhere will be accepted for publication in the Studies.

After the publication of two volumes of miscellaneous papers, the Studies were differentiated into series, of which the following are now being issued: 1, social science series; 2, science series; 3, literary and linguistic series; 4, philosophy and education series; 5, mathematics series. New series will be established, as papers which may not properly fall in any of the above groups are accepted for publication.

Frank Thilly editor 1901-1904
William G. Brown editor 1905-1912

VOLUME 1

1. Contributions to a psychological theory of music, by Max Meyer, Ph. D., professor of experimental psychology. vi, 80 p. 1901. 75 cents. Out of print.
2. Origin of Covenant Vivien, by Raymond Weeks, Ph. D., professor of romance languages. viii, 64 p. 1902. 75 cents. Out of print.
3. The evolution of the northern part of the lowlands of southeast Missouri, by C. F. Marbut, A. M., professor of geology. viii, 63 p. 1902. $1.25. Out of print.
4. Eileithyia, by Paul V. C. Baur, Ph. D., acting professor of classical archaelogy. vi, 90 p. 1902. $1.00.
5. The right of sanctuary in England, by Norman Maclaren Trenholme, Ph. D., professor of history. viii, 106 p. 1903. 75 cents. Out of print.

VOLUME 2

1. Ithica or Leucas? by William Gwathmey Manly, A. M., Professor of greek language and literature. vi, 52 p. 1903. $1.00.
2. Public relief and private charity in England, by Charles A. Ellwood, Ph. D., professor of sociology. viii, 96 p. 1903. 75 cents. Out of print.
3. The process of inductive inference, by Frank Thilly, Ph. D., professor of philosophy. v, 40 p. 1904. 35 cents. Out of print.

4. Regeneration of crayfish appendages, by Mary I. Steele, M. A. viii, 47 p. 1904. 75 cents. Out of print.
5. The spermatogenesis of anax junius, by Caroline McGill. viii, 15 p. 1904. 75 cents. Out of print.

LITERARY AND LINGUISTIC SERIES

VOLUME 1

Chevalerie Vivien, facsimile phototypes, with an introduction and notes, by Raymond Weeks, Ph. D., formerly professor of romance languages. 12 p, plates 24. 1909. $1.25.

VOLUME 2

The cyclic relations of the Chanson de Willame, by Theodore Ely Hamilton, A. M., Ph. D. ix, 301 p. 1911. $1.25.

MATHEMATICAL SERIES

VOLUME 1

1. On the definition of the sum of a divergent series, by Louis Lazarus Silverman, Ph. D. v, 96 p. 1913. $1.00.

PHILOSOPHY AND EDUCATION SERIES

VOLUME 1

1. The treatment of personality by Locke, Berkeley and Hume, by Jay William Hudson, Ph. D., assistant professor of philosophy. xvi, 96 p. 1911. 75 cents.

SCIENCE SERIES

VOLUME 1

1. Topography of the thorax and abdomen, by Peter Potter, M. A., M. D. vii, 142 p. 1905. $1.75. Out of print.
2. The flora of Columbia and vicinity, by Francis Potter Daniels, Ph. D. x, 319 p. 1907. $1.25.

VOLUME 2

1. An introduction to the mechanics of the inner ear, by Max Meyer, Ph. D., professor of experimental psychology. viii, 140 p. 1907. $1.00.

2. The flora of Boulder, Colorado, and vicinity, by Francis Potter Daniels, Ph. D. viii, 453 p. 1911. $1.50.

VOLUME 3

1. Barite deposits of Missouri and geology of the barite district, by William Arthur Tarr, associate professor of geology, University of Missouri. xii, 111 p. 10 pl. 1918. $1.25.

SOCIAL SCIENCE SERIES

VOLUME 1

The clothing industry in New York, by Jesse E. Pope, Ph. D., professor of economics and finance. xviii, 340 p. 1905. $1.25.

VOLUME 2

1. The social function of religious belief, by William Wilson Elwang, Ph. D. viii, 100 p. 1908. $1.00.
2. The origin and early development of the English universities to the close of the thirteenth century, by Earnest Vancourt Vaughn, A. M., instructor in history. viii, 147 p. 1908. $1.00.
3. The origin of the werewolf superstition, by Caroline Taylor Stewart, A. M., Ph. D., assistant professor of germanic languages. iv, 32 p. 1909. 50 cents.
4. The transitional period, 1788-1789, in the government of the United States, by Frank Fletcher Stephens, Ph. M., Ph. D., instructor in American history. viii, 126 p. 1909. $1.00.

VOLUME 3

1. Assyrian historiography: a source study, by Albert Ten Eyck Olmstead, Ph. D., associate professor of ancient history. pp. viii, 65. 1916. $1.00.
2. Anton's oriental policy until the defeat of the parthian expedition, by Lucile Craven, Ph. D. pp. xii, 88, 1920. $1.00.

THE UNIVERSITY OF MISSOURI BULLETIN

From 1892 to 1900 there were various bulletins, circulars, and announcements published and distributed, but they were not numbered consecutively nor published regularly. One number of the bulletin is known to have been published August 25, 1893, and three to have been published in 1894, but such ephemeral material was not preserved. There undoubtedly were other bulletins. Beginning with volume 1, number 1, February, 1900, the bulletins have a consecutive number.

Bulletin, volumes 1 to 3, number 4, had the title, Bulletin of the University of the State of Missouri. In 1911 a new series of the bulletins was issued. The series which began with volume 1, 1900, was given the title, General series, 1911-1913, with a continuation of the volume number which the bulletin had before the new series was begun. Bulletins issued previous to 1910 are mostly out of print. Practically all issued since then are available for distribution.

GENERAL SERIES

Published monthly

Edited by C. E. Kane

The object of this series is to furnish information regarding the University and its several colleges and schools. It accordingly consists of the general catalog and the individual announcements of the several divisions of the University.

VOLUME 1, 1900

1. February. Summer school, June 4 to August 25. 13 p. il.
2. Announcement to teachers of work in progress in certain classes. 15 Mar-1 June 1900. 7 p.
3. June. Catalog 1899-1900. 224 p.
3. June. Circular of information. 4 p.
4. July. Department of medicine. 4 p.
5. August. School of engineering. 4 p.
6. September. The growth of the University. 4 p.
7. October. Short winter courses in agriculture and horticulture. 4p.
8. November. Short winter courses in agriculture and horticulture. 16 p.

VOLUME 2, 1901

1. January. Circular of information. 4 p.
2. February. Announcement to teachers of work in progress in certain classes, 15 March to 1 June, 1901. 8 p.

3. March. Summer school, June 3 to August 24, 1901. 16 p. il.
4. April. Department of law. 4 p.
5. May. Catalog 1900-1901. 268 p.
6. June. Department of medicine. 4 p.
7. July. Circular of information. 4 p.
8. August. Department of engineering. 4 p.
9. September. Agriculture, mechanic arts, household economics. 4 p.
10. October. Special winter courses in agriculture, horticulture and dairying. 4 p. il.
11. November. Results of a religious census of Columbia. 4 p. (Called No. 10)
12. December. Short winter courses in agriculture, horticulture and dairying. January 1, 1902, to March 22, 1902. 16 p.

VOLUME 3, 1902

1. January. Buildings, libraries, laboratories. 4 p.
2. February. Growth in eleven years, 1890-1901. 4 p.
3. March. Summer session for 1902, June 2 to August 30. 15 p.
4. April. Department of law. 4 p.
5. May. Announcement of the department of medicine, 1902-1903. 19 p.
6. June. Catalog, 1901-1902. 244 p.
7. July. Circular of information. 4 p.
8. August. School of engineering. 4 p.
9. September. School of agriculture. 4 p.
10. October. Special winter courses in agriculture, animal husbandry, horticulture, and dairying. 4p. il.
11. November. Short winter courses in agriculture, horticulture, animal husbandry, and dairying. 18 p. il.
12. December. What the University has done for Missouri. 9 p.

VOLUME 4, 1903

1. January. The condition of the almshouses in Missouri. 6 p.
1. Supplement. The condition of the county jails in Missouri. 8 p.
2. February. Former students living in Missouri. 1st ed. 24 p. 2d ed. (without title), 26 p.
3. March. Summer session for 1903. (June 1 to August 28). 16 p.
4. April. Department of law. 2 editions, one 4 p., the other 4 p. and 4 p. il.
5. May. Catalog, 1902-1903. 242 p.
6. June. Department of medicine, 2 editions, one 4 p., the other 4 p. and 8 p. il.

7. July. Circular of information, 2 editions, one 4 p., the other 4 p. 4 p. and 8 p. il.
8. August. School of engineering, 2 editions, one 4 p. the other 4 p. and 16 p il.
9. September. College of agriculture, 2 editions, one 4 p., the other 4 p. and 8 p. il.
10. October. College of agriculture. Short winter courses in agriculture, dairying, and animal husbandry. Courses begin January 5, 1904. 16 p. il.
11. November. Parker memorial hospital, 10 p. il.
12. December. Student homes. 12 p. il.

VOLUME 5, 1904

1. January. Former students living in Missouri. 28 p.
2. February. Academic department. Circular of information. 12 p.
3. March. Summer session for 1904 (June 2 to August 2). 16 p.
4. April. Department of law announcement, 1905-1906. 24 p.
5. May. Catalog, 1903-1904. 292 p.
6. June. Department of medicine. 4 p.
   Incorrectly numbered v. 6, no. 6 afterwards enlarged and correctly numbered, 7 p.
7. July. Circular of information, 4 p.
8. August. School of engineering. 4 p.
9. September. College of agriculture. 4 p.
10. October. College of agriculture. Short winter courses; agriculture, dairying and animal husbandry. 19 p.
11. November. What the University has done for Missouri. 16 p.
12. December. Growth in thirteen years (1890-1903). 4 p.

VOLUME 6, 1905

1. January, 1905. The University of Missouri. 52 p.
2. February. Catalog, 1904-1905. 345 p.
3. March. Summer session for 1905 (June 10 to August 10). 25 p.
4. April. Department of law annuoncement, 1905-1906. 24 p.
5. May. Academic department. Circular of information, 1905-1906. 16 p.
6. June. Department of medicine, 1905-1906. 16 p.
6. June. Teachers' college.
7. July. General announcement, 1905-6. 16 p.
8. August. School of engineering. Circular of information 1905-6. 26 p.
9. September. College of agriculture. Announcement 1905-6. 24 p.

10. October. College of agriculture. Short winter courses; agriculture, dairying and animal husbandry. 16 p.
11. November. Obligations and opportunities of the churches at the University of Missouri. 4 p.
12. December. Announcement of the second semester. January 30 to June 6, 1906. 4 p.

VOLUME 7, 1906

1. January. Purpose of the summer session. 4 p.
2. February. University of Missouri (views). 32 p.
3. March. Academic department. Teachers college 1906-1907. 36 p.
4. April. Department of law. Announcement 1906-7. 24 p.
5. May. Catalog 1905-6. 400 p.
6. June. Department of medicine. Announcement 1906-7. 4 p.
7. July. General announcement. 8 p. il.
8. August. School of engineering 1906-7. 14 p.
9. September. College of agriculture. 1906-7. 16 p.
10. October. College of agriculture. Short winter courses, agriculture, dairying and animal husbandry. 20 p.
11. November. Announcement for second semester.
12. December. Alumni directory. 105 p.

VOLUME 8, 1907

1. January. The success of the college graduate, by J. C. Jones. 16 p.
2. February. Views of the University of Missouri. 32 p.
3. March. Announcement of the summer session for 1907. 29 p.
4. April. Department of law announcement 1907-8. 24 p.
5. May. Catalog 1906-7. 427 p.
6. June. Teachers college announcement 1907-8. 29 p.
7. July. University of Missouri. General announcement. 8 p. il.
8. August. Department of engineering. Circular of information 1907-8. 16 p.
9. September. College of agriculture. Announcement 1907-8.
10. October. Medical department. Announcement 1907-8. 30 p. il.
11. November. College of agriculture. Short winter courses, agriculture, dairying and animal husbandry. 23 p.
12. December. Announcements for second semester, January 29 to June 5, 1908.

VOLUME 9, 1908

1. January. Missouri state military school announcement 1907-8. 16 p.

2. February. Announcement of summer session 1908. 30 p.
3. March. College of arts and science announcement 1908-9. 48 p.
4. April. Department of law announcement 1908-9. 24 p.
5. May. Catalogue 1907-8. 468 p.
6. June. Medical department announcement 1908-9. 27 p. il.
7. July. Views of the University of Missouri. 16 p.
8. August. Department of engineering circular of information 1908-9. 19 p.
9. September. Not published.
10. October. Practical instruction for young farmers. 16 p.
11. November. Agriculture as a career (numbered vol. 8, no. 12, without date).
12. December. Announcements for the second semester. 8 p.

VOLUME 10, 1909

1. January. Announcement of summer session 1909. 32 p.
2. February. Teachers college announcement 1909-10. 4 p.
3. March. Not published.
4. April. School of law announcement 1909-10. 24 p.
5. May. Catalogue 1908-9. 512 p.
6. June. School of medicine announcement 1909-10. 24 p.
7. July. Announcement of the school of engineering 1909-10. 16 p.
8. August. Education for agriculture. 24 p. il.
9. September. Short winter courses in agriculture 1909-10. 24 p.
10. October. Rural education. The soil by R. H. Emberson. 8 p.
11. January. 1910, rural education. The horse by R. H. Emberson. 8 p.
12. December. 1909, second semester courses 1910. 18 p.

VOLUME 11, 1910

1. January. Announcement of the summer session 1910. 32 p.
2. February. Announcement of the school of education 1910-11 38 p.
3. March. Not published.
4. April. School of law announcement 1910-11. (Numbered as v. 10, no. 4). 24 p.
5. May. Catalogue 1909-10. 521 p.
6. June. School of medicine announcement 1910-11. 24 p.
7. July. Announcement of the school of journalism 1910-11. 15 p.
8. August. Education for agriculture. 24 p.
9. September. Announcement of the school of engineering 1910-11. (numbered as v. 10, no. 9). 20 p.
10. October. Short winter courses in agriculture. 23 p. il.

11. November. Second semester courses. 18 p.
12. December. Not published.

VOLUME 12, 1911

1. January. Announcement of the summer session 1911. 40 p.
2. February. Announcement of the graduate school 1911-12. 64 p.
3. March. Announcement of the school of education 1911-12. 27 p.
4. April. Announcement of the school of law. 24 p.
5. May. Catalogue 1910-11.
6. June. Announcement of the school of medicine 1910-11. 22 p.
7. July. Announcement of the college of arts and science 1911-12. 40 p.
8. August. Announcement of the school of journalism. 1911-12. 14 p.
9. September. Announcement of the school of engineering 1911-12. 27 p.
10. October. Announcement of the college of agriculture (regular session) 1911-12. 43 p.
11. November. Announcement of the two-year winter course college of agriculture 1911-12. 53 p. il.
12. December. Announcement of second semester courses 1911-12. 23 p.

VOLUME 13, 1912

1. January. Announcement of summer session 1912. 48 p. il.
2. February. "Every day at the University" (A glimpse of student activities with views of the buildings). 48 p.
3. March. Announcement of the graduate school 1912-13. 62 p.
4. April. Catalogue 1911-12. 526 p.
5. May. Announcement of the school of education 1912-13. 32 p. il.
6. June. Announcement of the school of medicine 1912-13. 41 p.
7. July. Announcement of the school of law 1912-13. 17 p.
8. August. Announcement of the school of journalism 1912-13. 18 p.
9. September. Not published.
10. October. Announcement of the college of agriculture (regular session) 1912-13. 55 p.
11. November. Announcement of the two-year winter and short courses, college of agriculture 1912-13. 51 p.
12. December. Announcement of the second semester courses 1912-13. 20 p.

VOLUME 14, 1913

1. January. Announcement of the summer session 1913. 46 p. il.

2. February. Announcement of the college of arts and science 1913-14. 33 p.
3. March. Announcement of the graduate school 1913-14. 61 p
4. April. Announcement of the school of education 1913-14. 31 p
5. May. Catalogue 1912-13. 488 p.
6. June. Announcement of the school of medicine 1913-14. 32 p
7. July. Announcement of the school of law 1913-14. 34 p.
8. August. Announcement of the school of journalism 1913-14 14 p.
9. September. Announcement of the school of engineering 1913-14 44 p. il.
10. October. Announcement of the college of agriculture (regular session) 1913-14. 58 p. il.
11. November. Announcement of the two year winter course and other short courses, college of agriculture, 1913-14. 42 p. il.
12. December. Announcement of the second semester courses 1913 14. 22 p.

VOLUME 15, 1914

1. January. Announcement of the graduate school, 1914-15. 55 p
2. February. Announcement of the summer session, 1914. 44 p.
3. April. Catalogue 1913-14. 464 p.
4. May. Announcement of the school of education. 1914-15. 51 p
5. May. Announcement of the school of commerce. 1914-15. 20 p
6. May. Announcement of the school of engineering. 1914-15. 48 p
7. June. Announcement of the school of medicine. 1914-15. 34 p
8. July. Announcement of the college of agriculture (regular session) 1914-15. 62p.
9. July. Announcement of the school of law. 1914-15. 29 p.
10. Aug. Announcement of the school of journalism. 1914-15. 17 p
11. Sept. Announcement of the two-year winter course and other short courses, college of agriculture, 1914-15. 43 p.
12. Dec. University of Missouri month by month. 1915.

VOLUME 16, 1915

1. January. Announcement of the graduate school. 1915-16. 64 p
2. February. Announcement of the summer session. 1915. 43 p
3. March. Catalogue. 1914-15. 539 p.
4. March. Announcement school of engineering. 1915-16. 45 p.
5. April. Announcement of the school of journalism. 1915-16. 23 p
6. May. Announcement of the school of commerce. 1915-16. 22 p
7. May. Announcement of the school of law. 1915-16. 36 p.
8. June. Announcement of the school of education. 1915-16. 36 p
9. June. Announcement of the school of medicine. 1915-16. 61 p

10. July. Announcement of the college of agriculture. 1915-16. 17 p.
11. September. Announcement of two-year winter courses and other short courses, agriculture. 1915-16. 50 p.
12. October. Announcement of the graduate school. 1916-17. 68 p.

VOLUME 17, 1916

1. February. Announcement of the summer session. 1916. 54 p.
2. May. Announcement of the school of journalism. 1916-17. 22 p.
3. April. Catalogue. 1915-16. 531 p.
4. June. Announcement of the school of engineering. 1916-17. 34 p.
5. June. Announcement of the school of law. 1916-17. 25 p.
6. July. Announcement of the college of agriculture. 1916-17. 43 p.
7. August. Announcement of the school of medicine. 1916-17. 23 p.
8. August. Announcement of the two-year winter course and other short courses. 1916-17. 50 p.

VOLUME 18, 1917

1. January. Announcement of the graduate school. 1917-18.
2. February. Announcement of summer session. 1917.
3. March. Announcement school of law. 1917-18.
4. March. Special announcement summer session. 1917.
5. March. Special announcement summer session. 1917.
6. April. Announcement of business & public administration. 1917-18.
7. May. Announcement school of journalism. 1917-18.
8. May. Catalog. 1917-18.
9. May. Announcement school of engineering. 1917-18.
10. June. College of agriculture announcement. 1917-18.
11. July. School of medicine announcement. 1917-18.
12. July. Two-year winter course announcement. 1917-18.
13. August. Schedule of courses. 1917-18.
14. December. Alumni directory 1843-1917 by H. H. Kinyon.

VOLUME 19, 1918

1. January. Graduate school announcement. 1918-19.
2. February. Summer session special announcement.
3. February. Summer session announcement. 1918.
4. March. New three-term calendar.
5. April. Engineering school announcement. 1918-19.
6. June. Catalog. 1918-19.
7. June. School of journalism announcement. 1918-19.
8. School of law announcement. 1918-19.

9. July. College of agriculture announcement. 1918-19.
10. July. School of business and public administration. 1918-19.
11. July. Two-year winter course announcement. 1918-19.
12. August. Schedule of courses fall and winter terms. 1918-19.
13. September. Missouri state military school.

VOLUME 20, 1919

1. February. Spring-summer term. Special announcement.
2. March. Spring-summer term announcement.
3. March. Graduate school announcement. 1919-20.
4. April. School of medicine announcement. 1919-20.
5. April. School of engineering announcement. 1919-20.
6. June. College of agriculture announcement. 1919-20.
7. June. School of business and public administration announcement. 1919-20.
8. July. Department of forestry announcement. 1919-20.
9. July. Catalog. 1919-20.
10. July. Two-year winter course in agriculture announcement. 1919-20.
11. August. School of journalism announcement. 1919-20.
12. (17) School of law announcement. 1919-20.
13. August. Two-year winter course in agriculture (special).
14. September. Schedule of courses.
15. September. Training for social work.
16. September. Graduate school announcement. 1920-21.

VOLUME 21, 1920

1. January. Spring-summer term announcement. 1920.
2. March. School for nurses announcement. 1920-21.
3. March. School of journalism announcement. 1920-21.
4. April. General catalog. 1920-21.
5. School of business and public administration announcement. 1920-21.
6. School of engineering announcement. 1920-21.
7. May. College of agriculture announcement. 1920-21.
8. Not published.
9. School of law announcement. 1920-21.
10. June. School of medicine announcement. 1920-21.
11. July. Two-year winter course in agriculture announcement. 1920-21.
12. August. Schedule of courses. 1920.
13. August. Schedule of courses. Two-year winter course in agriculture.

14. October. School of engineering. Courses for mechanics 1920-21.
15. December. Schedule of courses, winter. 1921.
16. December. Graduate school announcement. 1921-22.

ASTRONOMICAL SERIES

(Laws observatory bulletin)

Published irregularly.

Edited by Robert Horace Baker.

This bulletin is devoted exclusively to the publications of astronomical researches conducted in the laws observatory. Numbers one to sixteen were edited by Frederick Hanley Seares under the title, laws observatory. Bulletin 1902-1908. It was then placed in the astronomical series of the University bulletin.

Copies may be obtained from the librarian, except numbers 1-9, which are out of print.

VOLUME 1

1. Observations and elements of comet b 1902 (Perrine).
2. Observations of comets.
3. Observations of comet a 1904 (Brooks).
4. Observations of a comet e 1904 (Borrelly).
   Photometric observations of Nova Germinorum ch. 2387.
   Special time signals from U. S. naval observatory.
5. The polaris vertical circle method of determining time and azimuth introduction.
6. The agol variable 188. 1904 Draconis.
7. Photometric investigations.
   The disc photometer.
   The wedge photometer.
   Investigation of the wedges.
8. A grant from the gould fund.
   General remarks concerning variable star observations.
   A new variable, 88. 1906 Lacertae.
   Preliminary results for V Lacertae, 110. 1904.
   The variable V vulpeculae, 4.1904.
   Preliminary note on variable 108.1905 Capricorni.
9. The Algol variable RR Draconis (188.1904).
   Preliminary announcement concerning the Algol variable 121.-1906 Draconis.
10. Announcement of preliminary results for variable stars.
    (1) General remarks and star list.
    (2) Preliminary results.

11. The variable RS Cassiopeiae (108.1904).
12. Finding ephemerides for comet 1894 IV (E. Swift).
13. The Zöllner-Müller photometer.
    The Gans-Crawford telescope.
    The variable X Lacertae (88.1906).
    The variable V Lacertae (110.1904).
14. The variable RV Tauri (45.1905).
15. The Algol variable RW Monocerotis (24.1907).
    Preliminary announcements concerning variable stars.
16. The long-period Algol variable RZ Ophiuchi (193.1905).
    Preliminary announcement concerning SW Andromedae (5.1907).

VOLUME 2

17. The antalogol variable St. Ophiuchi (52.1907).
18. The algol variable Rx Draconis (121.1906).
19. The Algol variable Rz Draconis (26.1907).
20. Studies with the polarizing photometer.
21. The rotating ellipsoid Ru Camelopardalis.
22. The visual and photographic light variations of RR Lyrae by C. C. Kiess.
23. The visual and photographic light variations of Rt Aurigae by C. C. Kiess.
24. Investigations in extra focal photometry by R. H. Baker and Edith E. Cummings.
25. The eclipsing binary Rx Herculis, by Robert H. Baker, and Edith E. Cummings.
26. The eclipsing binary Z Vulpeculae, by Robert H. Baker.
27. The eclipsing binary TV Cassiopeiae, by Edith E. Cummings.
28. The eclipsing binary u Herculis, by Robert H. Baker.

EDUCATION SERIES

Published irregularly

Edited by Jesse H. Coursault

The object of the education series is the publication of new formulations of educational principles and data of direct value to the schools of the state, and of educational researches which have significance for other schools of education.

Copies of these bulletins may be obtained from the editor.

1. June, 1911. Circular of information to accredited schools. Fifth edition revised. 123 p. Out of print.
2. November, 1911. Rural school consolidation in Missouri, by O. L. Kunkel and W. W. Charters. 36 p.

3. February, 1912. Journalism for teachers, by Frank L. Martin. 27 p.
4. December, 1912. Geography of Missouri, by Frederick Emerson. 74 p.
5. The teaching of poetry in the high school, by A. H. R. Fairchild. 104 p. 1914.
6. January, 1913. An experimental study of methods of teaching high school German, by Mamie M. Clarahan. 32 p.
7. Circular of information to accredited schools, sixth edition, revised. Issued by the committee on accredited schools, University of Missouri. 138 p. 1913.
8. The kind of scholarship records to be kept in schools, by Max R. Meyer, professor of experimental psychology. 14 p. 1914.
9. A course in grammar based on the mistakes made by school children in Kansas City, Missouri, by W. W. Charters, Dean of the faculty of education, and professor of theory of teaching, University of Missouri, and rdith Miller, teacher of English, Soldan high school, St. Louis, Mo. 41 p. 1915. Out of print.
10. Circular of information to accredited schools, seventh edition, revised. Issued by the committee on accredited schools, University of Missouri. 132 p. 1915.
11. Study of the rural schools of Saline County, Missouri, by Joseph D. Elliff, professor of high school administration, and Abner Jones, fellow in education, University of Missouri. 32 p. 1915.
12. Circular of information to accredited junior colleges, issued by the committee on accredited schools and colleges. Edited by J. H. Coursault, professor of history and philosophy of education. 182 p. 1918.
13. A standard library organization suggested for Missouri high schools, by Henry Ormal Severance, librarian, University of Missouri. 19 p. 1919. Out of print.

ENGINEERING EXPERIMENT STATION SERIES

Published quarterly

"This series is the official publication of the engineering experiment station of the University, which was establshed by the board of curators on July 1, 1909, for the investigation of such problems in engineering as appear to be of the most direct and immediate value to the people of the state and for researches of importance to manufacturing and industrial interests and to engineers."

Some experiments in the storage of coal by E. A. Fessenden and J. R. Wharton. (Published in 1908, previous to the establishment of the experiment station.)

Copies of these bulletins may be obtained from the dean of school of engineering.

VOLUME 1, 1910

1. March. Acetylene for lighting country homes by J. D. Bowles. 34 p.
2. June. Water supply for country homes by K. A. McVey. 35-54 p.
3. September. Sanitation and sewage disposal for country homes by W. C. Davidson. 55-72 p.
4. Not published.

VOLUME 2, 1911

1. March. Heating value and proximate analysis of Missouri coals by C. W. Marx and Paul Schweitzer. (Reprint of report published previous to establishment of experiment station). 16 p.
2. June. Friction and lubrication testing apparatus by Alan E. Flowers. 20 p.
3. September. An investigation of the road making properties of Missouri stone and gravel by W. S. Williams and R. Warren Roberts. 70 p.
4. Not published.

VOLUME 3, 1912

1. March. The use of metal conductors to protect buildings from lightning by E. W. Kellogg. 55 p.
2. June. Firing tests of Missouri coal by H. N. Sharp. 44 p.
3. September. Report of steam boiler trials under operating conditions, by A. L. Wescott. 21 p.
4. Not published.

VOLUME 4, 1913

1. March. Economics of rural distribution of electric power by L. E. Hildebrand. 50 p.
2. June. Comparative tests of cylinder oils by M. P. Weinbach. 28 p.
3. Artesian waters in Missouri by A. W. McCoy. 73 p. 1913.
4. Friction tests of lubricating greases and oils by A. L. Wescott. 72 p. 1913.

VOLUME 5, 1914

14. Effects of heat on Missouri granites by W. A. Tarr and L. N. Neuman. 64 p. 1914.
15. A preliminary study relating to water resources of Missouri by T. J. Rodhouse. Out of print.

16. The economics of electric cooking by P. W. Gumaer. 62 p. 1915.
17. Earth roads and oiling of roads by H. A. LaRue. 30 p. 1916.
18. Heat transmission through boiler tubes by Edwin Allen Fessenden and J. William Haney. 1916. 74 p.
19. Geology of Missouri, by E. B. Branson, professor of geology, University of Missouri. 172 p. 1918.
20. Energy necessary to shear steel at high temperatures by Guy D. Newton, associate professor of engineering drawing and machine design, University of Missouri. 16 p. 1920.
21. Water supply and sewage disposal for country homes by E. J. McCaustland, dean of engineering experiment station, University of Missouri. 36 p. 1920.
22. Study relating to the water resources of Missouri by T. J. Rodhouse, professor of hydraulic engineering, University of Missouri. 57 p. 1920.

EXTENSION SERIES

Published irregularly

Edited by Charles H. Williams

This series of bulletins is the official publication of the Extension division of the Universty, object of which is to "serve citizens of the commonwealth who are unable to attend established institutions; to guide them in the pursuit of a more effective education; to give every person in the state an opportunity to get the most complete education possible at the lowest practicable cost; to make the University the center of every movement which concerns the interests of the state; and to bring the University and the home in close touch."

Copies of these bulletins may be obtained from the editor.

1. April, 1913. A new departure for University extension. 4 p.
2. July, 1913. School improvement agencies. Suggestions for superintendents and principals by W. W. Charters. 15 p.
3. October, 1913. Consolidation of schools of Missouri by R. H. Emberson. 20 p.
4. November, 1913. Correspondence courses in high school subjects. 8 p.
5. December, 1913. Announcement of the extension division.
6. Preservation of food in the home by Louise Stanley and May E. McDonald. 1914.
7. Care of free text-books by Henry O. Severance. 1914.
8. Announcement of the extension division, 1914-15.
9. Abnormal and defective children by W. H. Pyle, 1914.

10. Correspondence courses in high school subjects. 1914.
11. House fly by M. P. Ravenel, 1914.
12. Correspondence courses in high school subjects, 1915.
13. Announcement of the Extension Division, 1915-16.
14. Technical manual arts for general educational purposes by Ira S. Griffith, 1916.
15. Country roads. Part 1. Road drainage; Part 2. Culverts by F. P. Spaulding. 1916.
16. Handwork in grades 1 to 6, by Ella V. Dobbs and Juliaetta Zeits.
17. Not published.
18. Not published.
19. Correspondence courses in high school subjects. 1916.
20. Announcement of the extension division. 1916-17.
21. Manual of mental and physical examinations. 1916.
22. Better highways by E. J. McCaustland.
23. Feeding of children by Hildegrade Kneeland, instructor in home economics University of Missouri. 12 p. 1917.
24. Feeding the baby, by Louise Stanley, associate professor of home economics. 11 p. 1917.
25. Announcement of the extension division. 1917.
26. Extension division announcement 1919-20. 1919.
27. Extension division announcement of courses 1919-20. 1919.
28. Extension division announcement 1920-21. 1920.
29. Manual for the mental and physical examination of school children (revised) by William Henry Pyle. 40 p. 1920.

JOURNALISM SERIES

Published quarterly

Edited by Robert S. Mann

This series of bulletins discusses problems of the newspaper office. Both the editorial and business departments are considered.

Copies of these bulletins may be obtained from the dean of the school of journalism.

VOLUME 1

1. April, 1912. Missouri laws affecting newspapers compiled by Walter Williams. 66 p.
2. May, 1912. Journalism week in print. 64 p.
3. July, 1912. Retail advertising and the newspaper by Joseph E. Chasnoff. 47 p. Out of print.
4. March, 1913. The news in the country paper by Charles G. Ross. 44 p.
5. May, 1913. Journalism week, 1913. 63 p.

6. Building a circulation: Methods and ideals for small-town newspapers by J. B. Powell, instructor in advertising. 42 p. 1914.
7. The editorial page, by Robert S. Mann, assistant in journalism.
8. Journalism week, 1914.
9. The world's journalism by Walter Williams, dean of the school of journalism.
10. Newspaper efficiency in the small town, by J. B. Powell, instructor in advertising. Out of print.
11. Journalism week, 1915.
12. Deskbook of the school of journalism, edited by Charles G. Ross, associate professor of journalism. 1915. 84 p.
13. The journalist's library: Books for reference and reading, by Charles E. Kane, assistant in journalism. 89 p. 1916. Out of print.
14. Making the printed picture: A treatise on photoengraving methods, by Herbert W. Smith, instructor in illustrative art. 8 p. 1916. Out of print.
15. The law and the newspaper by Frederick W. Lehmann. 26 p. 1917.
16. The journalism of Japan, by Frank L. Martin, professor of journalism, University of Missouri. 38 p. 1918.
17. Problems of advertising. Addresses delivered in journalism week 1918, by George Eads, N. A. Huse, and M. P. Linn. 20 p. 1918.
18. "The Missouri Intelligencer and Boon's Lick Advertiser." A brief history of the first American newspaper west of St. Louis, by E. W. Stephens.
19. Deskbook of the school of journalism, sixth edition 1919 revised by Robert S. Mann, assistant professor of journalism, University of Missouri. 80 p. 1919.
20. The small town newspaper as a business. 20 p. 1919.
21. Deskbook of the school of journalism, seventh edition 1920 revised by Robert S. Mann. 80 p. 1920.

LAW SERIES

Published quarterly

"The purpose of the law series of the bulletin will be to offer to the lawyers of Missouri articles dealing with Missouri law or with questions of federal law which have arisen or are likely to arise in Missouri, as well as short notes on recent Missouri decisions."

Copies may be obtained from the editor.

1. Estates tail in Missouri, by Manley O. Hudson, professor of law. Out of print.

2. Estates by the marital right and by the courtesy in Missouri, by Charles K. Burdick, professor of law.
3. The rule against perpetuities in Missouri, by Manley O. Hudson, professor of law. Out of print.
4. The real party in interest statute in Missouri, by George L. Clark, professor of law.
   Limitations of personal property, by Manley O. Hudson, professor of law.
5. Conditions subsequent in conveyances in Missouri, by Manley O. Hudson, professor of law.
6. The writ of certiorari in Missouri, by J. P. McBaine, professor of law.
7. Tort liability for negligence in Missouri.—I. The duty to use care, by George L. Clark, professor of law.
8. Land tenure and conveyances in Missouri, by Manley O. Hudson, professor of law; index to law series, 1-8.
9. Preliminary stock subscription agreements in Missouri, by Manley O. Hudson, professor of law.
10. Some aspects of the status of children in Missouri, by Eldon R. James, professor of law.
11. Executory limitations of property in Missouri, by Manley O. Hudson, professor of law.
12. Tort liability for negligence in Missouri.—II. Legal or proximate cause.—III. Contributory misconduct of the plaintiff, by George L. Clark, professor of law.
13. The proposed regulation of Missouri procedure by rules of court, by Manley O. Hudson, professor of law.
    Certiorari from the Missouri supreme court to the court of appeals, by J. P. McBaine, professor of law.
14. Transfer and partition of remainders in Missouri by Manley O. Hudson, professor of law, University of Missouri. Notes on recent Missouri cases. 57 p. 1917.
15. Some problems in hearsay and relevancy in Missouri by E. W. Hinton, professor of law, University of Missouri. Notes on recent Missouri cases. 40 p. 1917.
16. Equitable servitudes in Missouri by George L. Clark, professor of law, University of Missouri. Notes on recent Missouri cases. Index to law series 1-16. 60 p. 1917.
17. Bar bulletin. Equitable relief against nuisances and similar wrongs in Missouri by George L. Clark, professor of law, University of Missouri. Notes on recent Missouri cases. 71 p. 1919.
18. Bar bulletin. Payment of debt to foreign representatives or heirs by Robert B. Fizzell. Notes on recent Missouri cases. 52 p. 1920.

19. Bar bulletin. Local and special legislation by Roscoe E. Harper. Notes on recent Missouri cases. 76 p. 1920.
20. Bar bulletin. Local and special legislation (concluded) by Roscoe E. Harper. Notes on recent Missouri cases. 84 p. 1920.

LIBRARY SERIES

Published irregularly

Edited by Henry Ormal Severance

The purpose of this bulletin is to furnish a medium for the publication of bibliographical researches, papers on library science, and such other material pertaining to library work as may be of interest to the people of Missouri and to libraries and institutions of the state.

Copies may be obtained from the editor.

VOLUME 1

1. 1908. Annual report of the librarian 1907. Appendix contains list of scientific serials in the libraries of the University. 60 p.
2. August, 1910. List of periodicals currently received by the libraries. 20 p.
3. September, 1910. Handbook of the libraries. 42 p.
4. April, 1912. Books for farmers and farmers' wives by Henry O. Severance, librarian. 24 p.
5. July, 1912. Partial bibliography and index of the publications of the college of agriculture and the agricultural experiment station, by Henry O. Severance, librarian. 19 p.
6. January, 1914. Check list of the official serial publications of the University. 44 p. Out of print.
7. Whole No. 7. A library primer for Missouri high schools, by Henry O. Severance, librarian. 1915. 20 p. Out of print.
8. Whole No. 8. Opening exercises of the new library building. Jan. 6, 1916. By Henry O. Severance, librarian. 1916. 22 p.
9. Whole No. 9. Check list of the official serial publications of the University 1914, 1915, 1916.
10. Check list of the official serial publications of the University of Missouri, edition 2, compiled by Henry O. Severance, librarian. 1921.

LITERATURE SERIES

1. The congress of letters, by Fred Newton Scott, professor of rhetoric in the University of Michigan. 16 p. 1917.

2. An odious comparison by George Morlin, professor of Greek in the University of Colorado. 15 p. 1917.

MEDICAL SERIES

Published irregularly

Edited by D. H. Dolley

"This series will be issued quarterly and is devoted primarily to topics within the general field of hygiene and preventive medicine. These bulletins will be illustrated and popular in character and as thorough and practical as possible."

Copies may be obtained from the department of preventive medicine.

1. Bacteria and disease, by O. W. H. Mitchell, associate professor of pathology and bacteriology. 39 p. 1913.
2. Prevention of typhoid fever, by W. J. Calvert, professor of preventive medicine. 38 p. 1913.
3. Prevention of contagious diseases in school children, by W. J. Calvert. 1913. 31 p.
4. On resuscitation, by D. H. Dolley, professor of pathology. 29 p. 1913.
5. The relation of sight and hearing to early school life by Guy L. Noyes, acting dean of the faculty of medicine and formerly professor of diseases of the eye and ear. 34 p. 1914.
6. The prevention of tuberculosis, by O. W. H. Mitchell. 36 p. 1914.
7. Water—the prevention of its polution, by O. W. H. Mitchell. 19 p. 1914.
8. Preventive medicine, its accomplishments and its aims, by M. P. Ravenel, professor of medical bacteriology and preventive medicine. 24 p. 1915.
9. The early diagnosis and treatment of cancer, by F. A. Martin, instructor in pathology. 12 p. 1915.
10. The prevention of malaria, by Elbert L. Spence, instructor in preventive medicine and medical bacteriology. 20 p. 1915.
11. Headache a symptom: its causes, prevention and cure, by Walden E. Muns, instructor in pathology. 34 p. 1916.

RURAL EDUCATION SERIES

Edited by Richard Huff Emberson.

VOLUME 1

1. August, 1909. Ten lessons on the study of Indian corn, prepared by M. F. Miller and arranged by R. H. Emberson. (Not numbered.)

2. October, 1909. The soil. Prepared by R. H. Emberson. (Numbered v. 10, No. 10. General series.)
3. January, 1910. The horse. Prepared by R. H. Emberson. (Numbered v. 10, No. 11. General series.)
4. February, 1911. A study of cattle. (Numbered v. 12, No. 4. Rural education series.)
(Continued in the extension series of the University of Missouri bulletins.)

SCIENCE SERIES

Published irregularly

Edited by George Lefevre

The science series of the bulletin is devoted to the publication of short original papers, preliminary announcements of results of research, and of articles of a general or popular character which are of sufficient interest and importance to warrant their publication.

Copies may be obtained from the librarian.

VOLUME 1

Non-technical lectures on the sciences, by members of the faculty of the University of Missouri.

1. The unity of science by Arthur O. Lovejoy, formerly professor of philosophy. 34 p. 1912. 30 cents.
2. Mathematics, by Earle R. Hedrick, professor of mathematics. 19 p. 1912. 25 cents.
3. Physics, by Oscar Milton Stewart, professor of physics. 22 p. 1912. 25 cents.
4. Chemistry, by William George Brown, professor of industrial chemistry. 26 p. 1912. 25 cents.
5. Astronomy, by Herbert Meredith Reese, assistant professor of physics. 17 p. 1913. 25 cents.
6. Geology, by Curtis Fletcher Marbut. 1913.
7. Botany, by C. Stuart Gager. 1913.
8. Experimental zoology, by Winterton Conway Curtis.
9. Evolutional zoology, by George Lefevre. May, 1914.

VOLUME 2

1. The implantation of the glochidium on the fish, by Daisy Young, assistant in zoology. 22 p. plates 3. 1911. 50 cents. Out of print.
2. Notes on the Ohio shales and their faunas, by E. B. Branson, professor of geology. 16 p. plates 3. 1911. 50 cents.

3. The blonde race and the Aryan culture, by Thorstein B. Veblen. 19 p. 1913. 25 cents.
4. The Devonian fishes of Missouri by E. B. Branson. 1914. 25 cents.

SOCIAL SCIENCE SERIES

Published irregularly

Edited by Norman Maclaren Trenholme

The social science series of the bulletin aims to provide for the publication of brief studies or accounts of political, social, economic or historical character which will be of interest and value to the people of the state.

VOLUME 1

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3. The social survey, its history and methods, by Carl C. Taylor, associate professor of sociology. 91 p. 1919.

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Edited by A. A. Jeffrey

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cultural college bulletin"; numbers 19-20, and 22-27 were published in the annual report of the state board of agriculture for 1886-1887; numbers 28-30 in the report for 1887-1888; and 31-35 in the report for 1888-1889. Numbers 9-12, 14, 21, and 28-33 were also issued separately. Bulletin 35 is also bulletin number 2 of the agricultural experiment station. Numbers 15, 16, and 24 were also published in the report of the dean of the college of agriculture, 1887.

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1. Announcement to farmers, the so-called "Hatch bill"; assent of governor; plan of organization; work and experiments proposed this season; personnel of station, by P. Schweitzer. 1888.
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Vol. 1, No. 1, Dec., 1908. The human side of a mining engineer's life, by Edmund B. Kirby. (Commencement address, June 10, 1908.)

Vol. 1, No. 2, March, 1909. 38th annual catalogue, 1908-1909.

Vol. 1, No. 3, June, 1909. Education for utility and culture, by Calvin M. Woodward. (Tau Beta Pi address.)

Vol. 1, No. 4, Sept., 1909. The history and the development of the cyanide process, by Horace Tharp Mann.

Vol. 2, No. 1, Dec., 1909. The Jackling field, school of mines and metallurgy.

Vol. 2, No. 2, March, 1910. 39th annual catalogue, 1909-1910. Out of print.

Vol. 2, No. 3, June, 1910. Some of the essentials of success, by Charles Summer Howe. (Commencement address, June 1, 1910.)

Vol. 2, No. 4, Sept., 1910. Friction in small air pipes, by E. G. Harris, Albert Park, and H. K. Peterson. (Continued by technical series, vol. 1, nos. 1 and 4.)

Vol. 3, No. 1, Dec., 1910. Some relations between the composition of a mineral and its physical properties, by G. H. Cox, and E. P. Murray.

Vol. 3, No. 2, March, 1911. 40th annual catalogue, 1910-1911.

Vol. 3, No. 3, June, 1911. Providing for future generations, by E. R. Buckley. (Tau Beta Pi address, May 24, 1911.)

Vol. 3, No. 4, Sept., 1911. Fall announcement of courses. Out of print.

Vol. 4, No. 1, Dec., 1911. Fortieth anniversary of the school of mines and metallurgy of the University of Missouri. Parker Hall memorial address. Laying of cornerstone of Parker Hall, Rolla, Missouri, October 24, 1911.

Vol. 4, No. 2, March, 1912. 41st annual catalogue, 1911-1912.

Vol. 4, No. 3, June, 1912. Mining and civilization, by J. R. Finlay. (Commencement address, May 31, 1912.)

Vol. 4, No. 4, Sept., 1912. Fall announcement of courses. Out of print.

Vol. 5, No. 1, Dec., 1912. Student life.

Vol. 5, No. 2, March, 1913. 42nd annual catalogue, 1912-1913.

Vol. 5, No. 3, never published.

Vol. 5, No. 4, never published.

Vol. 6, No. 1, never published.

Vol. 6, No. 2, March, 1914. 43rd annual catalogue, 1913-14.

Vol. 6, No. 3, never published.

Vol. 6, No. 4, never published.

Vol. 7, No. 1, Never Published.

Vol. 7, No. 2, March, 1915. 44th Annual Catalogue, 1914-1915.

Vol. 7, No. 3, March, 1915. Description of special courses in oil and gas and allied subjects.

Vol. 7, No. 4, September, 1915. Register of graduates, 1874-1915.

Vol. 8, No. 1, Jan., 1916. Bibliography on concentrating ores by flotation. Jesse Cunningham.

Vol. 8, No. 2, March, 1916. 45th Annual Catalogue, 1915-1916.

Vol. 8, No. 3, June, 1916. The Business of mining. W. R. Ingalls. (Commencement address, May 26, 1916.)

Vol. 8, No. 4, October, 1916. Register of graduates, 1874-191 (*Out of print.*)

Vol. 9, No. 1, Jan., 1917. Road problems in the Ozarks. E. G ris. Bibliography on rural roads. H. L. Wheeler.

Vol. 9, No. 2, March, 1917. 46th Annual Catalogue, 1916-191

Vol. 9, No. 3, June, 1917. What should a present-day metall education comprise? Charles Hermann Fulton. (Commenceme dress May 25, 1917.)

Vol. 9, No. 4, October, 1917. Register of graduates, 1874-191 S. M. men in military service.

Vol. 10, No. 1, Jan., 1918. Student life; revised edition.

Vol. 10, No. 2, March, 1918. 74th Annual Catalogue 1917-1

Vol. 10, No. 3, June, 1918. The Human side of mining engin James Furman Kemp. (Commencement address May 24, 1918.)

Vol. 10, No. 4, October, 1918. List of publications wanted Library, and of duplicates available for exchange: April 1, 192

Vol. 11, No. 1, January, 1919. (*Never published.*)

Vol. 11, No. 2, March, 1919. 48th Annual Catalogue 1918-191

Vol. 11, No. 3, June, 1919. Road problems in the Ozarks; 2 tion, revised and extended. E. G. Harris. Bibliography on rural H. L. Wheeler

Vol. 11, No. 4, October, 1919. Register of graduates, 1874-191

Vol. 12, No. 1, Jan., 1920. War service records of the M School of Mines. Compiled by G. E. Ebmeyer.

Vol. 12, No. 2, March, 1920. 49th Annual Catalogue, 1919-192

Vol. 12, No. 3, June, 1920 (*Delayed.*) Contemporary nove novelists: a list of references. H. L. Wheeler.

Vol. 12, No. 4, Oct., 1920. Department of Vocational Educa

Vol. 13, No. 1, Jan., 1921.

Vol. 13, No. 2, March, 1922. 50th Annual Catalogue, 1920-

TECHNICAL SERIES

Vol. 1, No. 1, November, 1911. Friction in air pipes. E. G. (Continuation of General Series, Vol. 2, No. 4.)

Vol. 1, No. 2, February, 1912. Metallurgy and ore dressing tories of the Missouri School of Mines and Metallurgy. D. Co H. T. Mann, H. A. Roesler. (*Out of print.*)

Vol. 1, No. 3, May, 1912. Some apparatus and methods fo onstrating rock drilling and the loading of drill holes in tunneling. Young.

Vol. 1, No. 4, August, 1912. Friction in air pipes. E. G. (Continuation of Vol. 1, No. 1, November, 1911.)

Vol. 2, No. 1, August, 1915. Comparative tests of piston drill bits. C. R. Forbes and L. M. Cummings.

Vol. 2, No. 2, November, 1915. Orifice measurements of air in large quantities. Elmo G. Harris.

Vol. 2, No. 3, February, 1916. Cupellation losses in assaying. Horace T. Mann and Charles Y. Clayton.

Vol. 2, No. 4, May, 1916. Geologic criteria for determining the structural position of sedimentary beds. G. H. Cox and C. L. Dake. (*Out of print.*)

Vol. 3, No. 1, August, 1916. Experiments from the flotation laboratory. C. Y. Clayton. (*Out of print.*)

Vol. 3, No. 2, November, 1916. Studies on the origin of Missouri cherts and zinc ores. G. H. Cox, R. S. Dean, and V. H. Gottschalk.

Vol. 3, No. 3, February, 1917. Preliminary report on blended Portland cement. E. S. McCandliss.

Vol. 3, No. 4, May, 1917. Studies in the production of oils and tars from bituminous materials. J. C. Ingram.

Vol. 4, No. 1, August, 1917. The hydrometallurgy and electrolytic precipitation of zinc. F. D. James.

Vol. 4, No. 2, November, 1917. The effect of addition agents in flotation; Part I. M. H. Thornberry and H. T. Mann.

Vol. 4, No. 3, February, 1918 Bibliography on the roasting, leaching, smelting and electrometallurgy of zinc. H. L. Wheeler.

Vol. 4, No. 4, May, 1918. An investigation of blended Portland cements. E. S. McCandliss and H. H. Armsby.

Vol. 5, No. 1, August, 1919. The carbonization of Missouri cannel coals. H. L. Dunlap, K. K. Kershner, and V. X. Smiley.

Vol. 5, No. 2, Nov., 1919. The effect of addition agents in flotation; Part II. M. H. Thornberry and H. T. Mann.

Vol. 5, No. 3, Feb., 1921. Coal mining methods in Missouri. W. W. Weigel.

GENERAL INDEX OF PUBLICATIONS

Abbreviations used in the index to indicate the series of publications.

Studies

S = Stud.
Sm = Stud. Mathematics series
Ss = Stud. Science series
Sos = Stud. Social science series
Sl = Stud. Lit and linguistic series
Sp = Stud. Phil. and edu. series

Bulletins

General series of the bulletin not indexed.
Ba = Bul. Astronomical series
Bed = Bul. Education series
Ben = Bul. Engineering exp. sta. ser.
Bex = Bul. Extension series
Bj = Bul. Journalism series
Bl = Bul. Law series
Blib = Bul. Library series
Blit = Bul. Literature series
Bm = Bul. Medical series
Br = Bul. Rural education series
Bs = Bul. Science series
Bos = Bul. Social science series

Agricultural college and experiment station publications.
Ab = Pub. Agri. exp. sta. bulletin
Ac = Pub. Agr. exp. sta. circulars
Abc = Pub. Agr. exp. sta. farm bul.
Aec = Pub. Agr. exp. sta. ext. cir.
Ar = Pub. Agr. exp. sta. research bulletin

Accredited schools. Circular Bed 1, 7, 10.
Accredited junior colleges Bed 12
Acetylene for lighting Ben v. 1 No. 1
Advertising
Building a circulation Bj 6
Retail advertising Bj 3
Probems of advertising Bj 17
Albrecht, W. A.
Soil inoculation Ac 86
Alfalfa
Alfalfa growing in Mo. Ab 72
Cooperative experiments. Ab 106
Growing alfalfa Aec 6
Handling the alfalfa crop Aec 60
Seeding of alfalfa Ac 40
Algol variables Ba 6, 9, 15, 18, 19
Allison, H. O.
Corn silage Ab 112, 150
Anatony's oriental policy Sos v. 3 No. 2
Applebud moth Ab 42
Apples Ab 10
Apple growing in Mo. Ab 61
Apple orchard Ab 49
Apple spurs Ar 40
"Sting" in the apple Ab 64
Bud selection Ar 39
Fruitfulness Ar 32
Missouri applegrowing Ac 32
Pruning Ac 90
Selected apple recipes Aec 93
Artesian waters of Missouri Ben v 4 No. 3
Asparagus Ab 43
Assyrian historiology Sos v 3 No. 1
Astronomy Bs 5

Babies
Feeding the baby Bex 24
Aec 23
Backus, L. S.
Parasites affecting farm animals Aec 13
Bagworm Ab 104. Ac 92
Bacteria Bm 1
Baker, R. H. Ba 24
25
26
28
Baker, W. H.
Soil saving dam Aec 14
Barite deposits of Missouri Ss v. 3 No. 1
Baur, P. V. C.
Eileithyia S. V. 1 No. 4
Bell, Babb
Canning by cold pack method. Aec 9
Cold school lunch. Aec 10
Homemakers club. Aec 19
How to save fats. Aec 46
Bees and beekeeping
Farm beekeeping Ab 138
Bibliography of pubs. of college of agriculture. Blib 5
Bird, R. M.
Bordeaux powder. Ac 20
New bordeaux powder. Ab 60

Black leg Ab 12
Blonderace Bs v. 2 No. 3
Boiler tests Ben v. 3 No. 3
Books for farmer Blib No. 4
Booth, N. O.
Spray calendar Ac 10
Booth, N. O.
Test of spray nozzles Ab 50
Bordeaux powder Ab 60
Directions for making Ac 20
Botany Bs 7
Bowles, J. D.
Acetylene for lighting Ben v. 1 No. 1
Boys' and girls' clubs
Exhibits and contests Aec 18
Grain judging Aec 58
Brandt, P. M.
How to build a guerlo silo Ac 67
Branson, E. B.
Devonian fishes of Mo. Bs v. 2 No. 4
Geology of Missouri Ben 19
Notes on the Ohio shales Bs v. 2 No. 2
Bread
Making light bread Aec 11
War breads Aec 25
Brown, Wm. G.
Chemistry Bs v. 1 No. 4
Butter
Effects of feeding cotton seed products Ar 27

Calvert, W. J.
Prevention of typhoid fever Bm 2
Prevention of contagious diseases Bm 3
Canning
By cold pack method Aec 9, 52
Calves
Birthweight Ac 35
Composition of bovine at birth Ar 38
Raising calves Aec 81
Ac 88
Raising with skim milk Ab 47, 57
Cancer, Bm 9
Carotin Ar 9, 10, 11, 12
Cattle Br 4
Beef cattle Ab 24
Beef production on high priced land Ac 24
Composition of flesh of cattle Ab 25
Composition of beef animals Ar 30
Effect of limited food Ar 18
Factors in beef production Ac 12
Fattening cattle for market Ab 76
Fattening cattle on blue grass Ab 90
Feeding tests Ab 28
Maintenance Ar 18
Wintering yearlings Ab 75

Chandler, W. H.
Combatting orchard and garden enemies Ab 102
Commercial fertilizers for strawberries Ab 113
Co-operation among fruit growers Ab 97
Hardiness of peach buds Ac 31
Instructions for spraying Ac 34
Killing plant tissue by low temperature Ar 8
Sap studies Ar 14
Winter killing of peach buds Ab 74
Chanson de Williame Sl v. 2

Charters, W. W.
Course in grammar Bed 8
Rural school consolidation Bed 2
School improvement agencies Bex No. 2
Chasnoff, J. E.
Retail advertising Bj No. 3
Check list of serial pubs. of University Blib 6, 9
Chemistry Bs 4
Cheese
Cheese making Aec 30
Cottage cheese making Aec 50
Chinch bug Ab 51 Ac 1, 2, 62 Aec 4
Childers, L. F.
Growing alfalfa Aec 6
Children
Abnormal Bex 9
Feeding Bex 23, 24
Feeding the baby Bex 24
Mental and physical exam. Bex 21, 29
Status in Missouri Bl 10

Clark, Geo. L.
Equitable relief against nuisances Bl 17
Equitable servitudes in Missouri Bl 16
Real property Bl 4
Tort liability for negligence Bl 7, 12

Clark, J. W.
Apples at various stages of growth Ab 10
Covering peach trees Ab 16
Seed germination Ab 6
Spraying for codling moth Ab 13
Clothing industry Sos v. 1
Clover Ac 6
Liming for clover Aec 61
Seeding of clovers Ac 42
Sweet clover Aec 36
Coal, Missouri Ben v. 2 No. 1; v. 3 No. 2
Colds
Cause and treatment Aec 79
College of agriculture. Publications
Bibliography and index Ab 105 Blib v. 2 No. 1
Congress of letters Blit 1
Conner, C. M.
Field experiences with wheat Ab 21
Field experiences with corn Ab 32
Conveyances Bl 5, 8
Connaway, J. W.
Hog cholera Ab 174
Immunization of swine Ac 29
Paralysis of hind quarter in swine Aec 86
Stomach worms in sheep Aec 87
Texas fever Ab 37, Ab 48
Contagious diseases. Preventive Bm 3
Cooking
Cooking vegetables Aec 1
Cooking by electricity Ben 16
How to cook soybeans and cow peas Aec 45
Cooperation
Among fruit growers Ab 97
Cooperative elevator assn' Aec 91
Corn
Cooperative variety tests Ab 87
Corn vs. oats for work mules Ab 114
Corn as stock food Ac 11
Corn silage Ab 150
Corn improvement Ab 59
Field experiments Ab 14, 32
How to test seed corn Aec 48
Life history Ab 9
Missouri corn growers Ac 19
Preparation of corn for fattening steers Ab 149
Selection and judging Ac 45
Selection for seed Ac 50
Study of Indian corn Br 1
Variety tests Ab 143
Corn borer Ac 94
Cotton seed Ac 66
Coursault, J. H.
Circular of information Bed 12
Covenant Vivien S v. 1 No. 3
Cowpeas Ab 73, Ac 6
Seeding of cowpeas Ac 39, 53
Crayfish appendages S v. 2 No. 4
Craven, Lucile
Antony's oriental policy Sos v. 3 No. 2
Creamery
Directions for testing cream Ac 64
Farmers creamery Ac 18
Variations in cream tests Ac 37
Yellow color in cream Ac 74
Crops
Crops for overflow lands Aec 24
Farm crops in S. W. Missouri Ab 123
Crop rotation Abc 29
Cummings, Edith Ba 25, 27
Curtis, W. C.
Experimental zoology Bs v. 1 No. 8
Dairying
Age of calving; growth of cows Ab 135
Dairy management Ab 26
Dairy husbandry Ab 56
Digestion trial with 2 Jersey cows Ar 4
Directions for testing milk Ac 41
Factors influencing growth of dairy heifers Ar 31
Farmers creamery Ac 18
Feeding the dairy cow Ac 26
Feeding the dairy cow Ab 58
Feeding for milk and production Ac 44
Keeping records of dairy cows Ac 57
Milk production costs Ab 156
Normal growth of dairy cattle Ar 36
Nutrients for milk production Ar 7
Per cent of fat in cream Ab 94
Per cent of fat in milk Ab 100
Profits for milk cows Ab 159
Profitable dairy herds Aec 43
Selection of dairy bull Aec 51
Testing dairy cows Ac 96

Tin can separators Ab 68
Trials with 5 Jersey cows Ar 5
Dams
Soil saving dam Aec 14
Daniels, F. P.
Flora of Columbia, Mo. Ss v. 1 No. 2
Flora of Boulder, Colorado Ss v. 2 No. 2
Davidson, W. C.
Sanitation and sewage disposal Ben v. 1 No. 3
Debt to foreign heirs Bl 18
Demaree, F. H.
Concrete silo Ac 49
Wheat growing in Missouri Ac 43
Yield of Oats Ac 46
Diseases
Fungous Ac 21, 23
Doane, D. H.
Farm adviser in Missouri Ac 59
County farm adviser plan Ac 60
Dobbs, Ella V.
Handwork in the grades 1 to 6 Bex No. 16
Dolly, D. H.
On resuscitation Bm 5
Doneghue, R. C.
Soils of Sullivan Co., Ab 92
Soils of Audrain Co., Ab 93
Douglass, T. R.
Experiments with farm crops Ab 123
Drainage investigations Ab 18
Drainage. Tile Aec 34
Dress and dresses
Garment making club Aec 90
How to pad a form Aec 82
Making simple wash dresses Aec 57
Selection of textiles Aec 83
Sewing processes Aec 89
Drying fruits Aec 23
Duley, F. L.
Handling farm manures Ab 166
Handling barn yard manure Aec 62
Soil experiment Ab 148
Durant, A. J.
White diarrhea in chickens Aec 85
Eckles, C. H.
Birthrate of calves Ar 35
Carotin Ar 9, 10, 11, 12
Capacity of silos Ab 164
Cause of wide variation in milk production Ar 2
Dairy husbandry Ab 56
Dairy bull Aec 5
Dep't. of dairy husbandry Ab 68
Digestion trials Ar 4
Effects of feeding cotton seed products Ar 27
Feeding the dairy cow Ac 26
Feeding for milk production Ac 44
Feeding the dairy cow Ab 58
Growth of dairy heifers Ar 31
Influence of fatness of cow Ab 100
Influence of plane of nutrition Ar 24, 25
Legumes Ab 162
Maintenance trials Ar 5
Nutrients for milk production Ar 7
Normal growth of dairy cattle Ar 36
Nutrients to develop bovine fitus Ar 26
Per cent of fat in cream Ab 94
Raising calves with skim milk Ab 57
Raising calves on skim milk Ac 47
Ration and age of calving Ab 135
Shock corn for silage Ac 71
Silo and its use Ab 133
Silo capacity Ac 89
Silo for Mo. farmers Ab 103
Silage investigation Ar 22
Variations in cream tests Ac 37
Winter rations for dairy heifers Ab 158
Editorial page Bj No. 7
Education
Value to farmer Ac 77
Eggs
Saving summer eggs Aec 78
Winter eggs Aec 59
Electric power distribution Ben v. 4 No. 1
Elliff, J. D.
Study of rural schools Bed 11
Elwang, W. W.
Social function of religious belief Sos v. 2 No. 1
Ellwood, C. A.
Public relief etc. S v. 2 No. 2
Emberson, R. H.
Consolidation of schools of Missouri Bex 3
Exhibits for boys' and girls' clubs Aec 18

Horse Br 3
Soil Br 2
Ten lessons in study of Indian corn Br 1
Emerson, F.
Geography of Missouri Bed 4
Eileithyre S v. 1 No. 4
Equitable relief against nuisances Bl 17
Equitable servitudes in Missouri Bl 16
Estates in Missouri Bl 1, 2
Etheridge, W. C.
Fattening lambs on forage Aec 56
How to grow soybeans Aec 75
Management of blue grass pastures Aec 66
Way to grow soybeans Aec 20
Way to grow sudan grass Aec 21
Etz, W. F.
Raising calves Aec 81
Evans, A. R.
Variety tests of corn Ab 143
Cotton seed selection Ac 66
Evaporators Ac 14

Fairchild, A. H. R.
Teaching poetry in high school Bed 5
Farm adviser Ac 59
County farm adviser Ac 60
Farm animals
Parasites Aec 13
Farm buildings Aec 38, 69
Farm lighting system Aec 39
Farm machinery Ab 4
Farming on a war basis Aec 31
Farm management
Cost and price tendencies Ac 97
Cost of producing wheat Ac 100
Influence of capital on farm organization Ab 175
Renting land Ab 167
Size of farm business Ab 140
Successful farm organization Ab 141
Farmers exchange Aec 27
Fats
How to save Aec 46
Favor, E. H.
Fungicides Ac 23
Feeds and feeding Ab 1, 2, 7, 8, 10, 11, 14, 19, 27, 28
Feeds and feeding
Feeding wheat Ab 136
Rations for breeding ewes Ab 120
Winter's feed supply Aec 55
Fence posts Ac 51
Fenton, F. C.
Farm buildings Aec 38
Tile drainage Aec 34
Water systems for the farm Aec 49
Ferguson, J. A.
Fence posts Ac 51
Growing a woodlot for seed Ac 52
Fertilization Abc 30
Fertilizers
Commercial fertilizers Ab 63
Commercial analyses Ab 66, 70
Commercial inspection Ab 77, 78, 80, 82, 85, 91, 99, 108
Fertilizer for wheat Aec 28
Handling barnyard manure Aec 62
Handling farm manure Ab 166
Manures and fertilizers Ab 34
Mo. fertilizer law Ac 58
Profitable tomato fertilizers Ab 169
Testing fertilizers Ab 178
Fessenden, E. A.
Heat transmission Ben 18
Fishes, Devonian Bs v. 2 No. 4
Fizzell, R. B.
Payment of debt for foreign representatives Bl 18
Flies Bex No. 11
House fly Aec 16
Flora of Columbia, Mo. Ss v. 1 No. 2
Flora of Boulder, Colo. Ss v. 2 No. 2
Flowers, Alan
Friction and lubrication Ben v. 2 No. 2
Floyd, B. F.
Fungous diseases Ac 21
Fodder Ab 7, 8
Food, preservation Bex No. 6
Forage crops
Fattening lambs on forage Aec 56
Forbes, E. B.
Grain rations Ab 65, 67
Forestry
Forest conditions in the Ozarks Ab 89
Growing a woodlot from seed Ac 57
Fox, Chas.
Sugar beets Ab 17
Fumigation Ab 177

Gager, C. S.
Botany Bs v. 1 No. 7

Garden
Farm garden Aec 7
Vegetable Ac 83
Time of planting vegetables Aec 21
Gardner, J. S.
Farm garden Aec 7
Gardner, V. R.
Bud selection Ar 39
Pruning the apple Ac 90
Geology Bs 6
Geology, see Missouri geology
Germination of seeds Ab 6
Ginseng
Diseases Ab 69
Glanders Abc 16, 33
Good roads
Better highways Bex 22
Country roads Aec 68 Bex 15
Good roads Abc 13
Roads Ben 17
Gould fund, grant Ba 8
Grain
Judging Aec 58
Grammar based on mistakes Bed 9
Grantham, A. E.
Cowpeas Ab 73
Grapes, Ab 46
Culture Ab 22
Grasses Abc 9, 35, Ab 2 109
Green, R. M.
Cost and price tendencies Ac 97
How to keep farm accounts Ac 84
Milk production costs Ab 156
Renting land Ab 167
Griffith, Ira A.
Technical Manual Arts Bex 14
Gumaer, P. W.
Economics of electric cooking Ben 16

Hackedorn, H.
Docking and castrating lambs Ac 61
Fattening lambs on forage Aec 56
Rations for breeding ewes Ab 120
Rye and blue grass pastures Ac 73
Use of pure bred ram Ac 65
Hackleman, J. C.
Crops for overflowed lands Aec 24
Factors in wheat production Ac 56
Handling the alfalfa crop Aec 60
How to test seed corn Aec 48
Haigh, L. D.
Composition of beef animals Ar 30
Composition of bovine at birth Ar 38
Effects of limited food on growth Ar 28
Inspection of commercial fertilizers Ab 160 Ab 168
Hamilton, C. C.
Prevent insect damage Aec 54
Hamilton, T. E.
Chanson de Willame Sl v. 2
Handwork in grades Bex 16
Haney, J. W.
Heat transmission Ben 18
Harper, R. E.
Local and special legislation Bl 19, 20
Haseman, L.
Bagworms Ac 92
Chinch bug Ac 62
Control of insect pests Ac 63
Controlling the chinch bug Aec 4
Control of San Jose scale Ab 133
Evergreen bagworm Ab 104
European corn borer Ac 94
Federal and state laws nursery stock Ac 99
Hessian fly Aec 80
House fly Aec 16
Insect pests of field crops Ab 170
Nursery and orchard insect pests Ab 176
San Jose scale in Missouri Ab 98
Tarnished plant bug Ar 29
Headache Bm 11
Hearsay and relevancy in Mo. Bl 15
Heat transmission Ben 18
Hedrick, E. R.
Mathematics Bs v. 1 No. 2
Helm, C. A.
Growing wheat in Missouri Aec 29
Sweet clover Aec 36
Hervey, G. W.
Meat scraps Ab 155
Hessian fly
Ab 62
Ac 70
Aec 80
Heyle, Essie M.
Modern rural home in Missouri Acc 95
Pickling fruits and Vegetables Aec 88
Selected apple recipes Aec 93

Hildebrand, L. E.
Economics of rural distribution of Electric power Ben v. 4 No 1
Hinton, E. W.
Some problems in hearsay and relevancy Bl 15
Hog cholera Ab 174 Aec 17
Hogging corn Aec 37
Hogs
Butchering Aec 42
Effect of rations in development Ab 81
Fattening hogs Ab 67
Feeding wheat Ab 136
Feeding Abc 1, 2, 8, 9, 10
Forage crops for swine Ac 55
Forage crop rotation for hogs Ab 110
Grain rations Ab 65
Green forage Ab 79
Immunization of swine Ac 29
Paralysis of hind quarter Aec 86
Pork production with forage crops Ab 95
Raising pigs Aec 77
Self feeders Ab 144
Swine feeding Ac 28
Home makers club Aec 19
Homes
Modern rural home Aec 95
Hooker, H. D.
Apples spurs Ar 40
Horses
Feeding and care of horses Ac 27
The horse Br 3
Hot beds and cold frames Ac 33
Howard, W. L.
Hot beds and cold frames Ac 33
Plant propogation Ac 13
Protecting orchard against frost Ac 35
Rest period in plants Ar 1, 15, 16, 17, 21
Hudelson, R. R.
Fertilizer for wheat Aec 28
Keeping soils productive Ac 102
Soil experiments Ab 126-130
Soil investigation Ab 119
Hudson, J. W.
Treatment of personality Sp No. 1
Hudson, Manley O.
Conditions subsequent in conveyances Bl 5
Estates tail Bl 1
Estates by marital right Bl 2
Executory limitations of property Bl 11
Land tenure and conveyance Bl 8
Limitations of personal property Bl 4
Preliminary stock subscriptions Bl 9
Proposed regulation of Missouri procedure Bl 13
Rule against perpetuities Bl 3
Transfer and partition of remainders Bl 14
Hutchison, C. B.
Cooperative experiments Ac 54
Cooperative exp. with alfalfa Ab 106
Drainage investigation Ab 118
Exp. with farm crops Ab 123
Grass investigation Ab 108
Growing rape for forage Aec 3
Hany Vetch Aec 2
Seeding of meadows Ac 68
Selection of corn for seed Ac 50
Soil experiments Ab 83, 84, 86, 127, 128-130
Variety tests of corn Ab 143
Insect Pests
Field crops Ab 134
Insect pests Ab 170
Nursery and orchard insect pests Ab 176
Tarnished plant bug Ar 29
Insecticides Ac 23
Insects
Control of garden and truck crop Aec 15
Prevent insect damage Aec 54
Ithaca S. V. 2 No. 1

James, E. R.
Some aspect of status of children in Mo. Bl 10
Jenson, Anna C.
Feeding the baby Aec 73
Johnson, O. R.
Cost of production on Missouri farms Ab 125
Cost of horse labor Ab 152
Cost of producing farm crops Ab 165
Cost of producing wheat Ac 100
Distribution of farm labor Ar 6
Farming on a war basis Aec 31
Influence of capital on farm organ. Ab 175

Land tenure Ab 121
Profits from milk cows Ab 159
Renting land Ab 167
Size of farm business Ab 140
Successful farm organization Ab 142
Value of education to the farmer Ac 77
Work of farmers' evchange Aec 27
Jones, Abner
Study of rural schools Bed 11
Journalism
Deskbook 1915 Bj 12
Deskbook 1916 Bj 19
Deskbook 1920 Bj 21
Journalism week in print 1912 Bj 2
Journalism week in print 1913 Bj 5
Journalism week in print 1914 Bj 6
Journalism week in print 1915 Bj 11
Journalism week in print 1918 Bj 17
Journalism of Japan Bj 16
Journalism for teachers Bed 3
Worlds journalism Bj 9
Journalists' library Bj 13
Junior college Bed 12

Kane, C. E.
Journalists' library Bj 13
Junior college Bed 12
Journalists' library Bj 13
Keffer, Chas.
Grape culture Ab 23
Seedling strawberries Ab 22
Spraying apple trees Ab 27
Strawberries Ab 18
Kellogg, E. W.
Use of metal conductors Ben v. 3 No. 1
Kempster, H. L.
Farmers poultry house Ac 75
Feeding baby chicks Ac 91
Farm poultry house construction Ab 107
Feeding for egg production Ac 76
Judging of chickens Aec 8
Meat scraps Ab 155
Missouri poultry house Ac 81
Protein feeds Ac 82
Sour milk for chicken feeding Ac 79
Story of a backyard flock Aec 26
Kiess, C. C. Ba 22, 23
Kitchens
Farm kitchen Aec 12
Kneeland, Hildegard
Feeding of children Bex No. 23
Krusekopf, H. H.
Agricultural lime Ab 146, 171
Soils of Missouri Ab 153
Kunkel, O. L.
Rural school consolidation Bed 2
Labor
Cost of horse labor Ab 152
Distribution of farm labor Ar 6

La Rue, H. A.
Earth roads and oiling of roads Ben 17
Land
Land tenure Ab 121 Bl 8
Renting land Ab 167
Leaf crumpler Ab 36
Leaf roller Ab 54
Fruit tree Ab 71
Lefevre, Geo.
Evolutional zoology Bs v. 1 No. 9
Legislation, local & special Bl 19, 20
Legumes Ab 162
Lehmann, E. W.
Farm lighting systems Aec 39
Magnum terrace Ac 98
Tile drainage Aec 34
Lehmann, F. W.
Law and the newspaper Bj 15
Librarian annual report 1907 Blib 1
Library building opening exercises Blib 8
Library primer Blib 7
Library organization for high schools Bed 13
Lighting rods Ben v. 3 No. 1
Lime Ab 146
Agricultural lime Ab 171
Linens
How to select and store Aec 44
Live stock
Community live stock breeding Aec 33
Pure bred live stock Aec 63
Loan office Bos 1
Lodeman, E. G.
Spray calendar Ab 30
Loomis, Ralph
Cooperative elevator assn' Aec 91
Lovejoy, A. O.
Unity of science Bs v. 1 No. 1
Lunches
Cold school lunch Aec 10

McBaine, J. P.
Writ of certiorari Bl 6, 13
McCaustland, E. J.
Better highways Bex 22
Country road Aec 68
Water supply and sewage disposal Ben 21
McCoy, A. W.
Artesian waters of Missouri Ben v. 4 No. 3
McCulloch, A. J.
Loan office experiment Bos 1
McDaniel, J. S.
Control of hog cholera Aec 17
McDonald, May L.
Preservation of food Bex 6
McGill, Caroline
Spermatogenesis of Anax Junius S v. 2 No. 5
McNatt, H. E.
Directions for testing milk Ac 41
Plastered or gurlo silo Ac 48
McVey, K. A.
Water supply Ben v. 1 No. 2
Major, H. F.
Pruning shade trees Ac 81
Malaria Bm 10
Manly, W. G.
Ithaca S v. 2 No. 1
Mann, L. B.
Raising calves Aec 81
Mann, Robert
Desk book Bj 19, 21
Editorial page Bj 7
Manual arts Bex 14
Marbut, C. F.
Geology, Bs v. 1 No. 6
Lowlands of Missouri S v. 1 No. 2
Soils of Ozark region Ar 3
Marketing
Wool marketing Aec 76
Martin, F. A.
Early diagnosis and treatment of cancer Bm 9
Martin, F. L.
Journalism of Japan Bj 16
Journalism for teachers Bed 3
Marx, C. W.
Missouri coals Ben v. 2 No. 1
Mathematics Bs 2
Meadows
Seeding Ac 68
Meckle, F. A.
Farm buildings Aec 69
Sewage disposal for farm homes Aec 71
Method of determining time Ba 5
Meyer, Max
Kind of scholarship records Bed 8
Mechanics of the inner ear Ss v. 2 No. 1
Psychol theory of music S v. 1 No. 3
Mildews
Powdery mildews Ar 23, Ar 37
Milk
Carotin Ar 9-12
Influence of plan of nutrition Ar 24, 25
Lactochrome Ar 13
Milk production costs Ab 156
Preservation of milk Ar 34
Variation in milk production Ar 2
Miller, Edith
Course in grammar Bed 9
Miller, M. F.
Agricultural lime Ab 146, 171
Alfalfa growing Ab 72
Cooperative variety tests of corn Ab 87
Cooperative exp. with alfalfa Ab 106
Cooperative exp. in agronomy Ac 36
Cooperative experiments Ac 54
Control of soil washing Ac 78
Drainage investigation Ab 118
Factors in wheat production Ac 56
Fertility of soils Ac 69
Fertilizer trials Ab 157
Grass investigation in Ozarks Ab 108
Maintaining soil fertility Ac 38
Seeding of cow peas Ac 39
Seeding of clovers Ac 42
Soil exp. on upland loam Ab 83
Soil exp. on prairie silt loam Ab 84
Soil experiment on rolling limestone Ab 86
Soil management in Ozark region Ab 88
Soil investigations Jasper Co., Ab 119
Soil experiments level prairies Ab 126
Soil experiments dark prairies Ab 127
Soil experiments glacial lands Ab 128

Soil experiments red limestone Ab 129
Soil experiments gray prairies Ab 130
Soil experiments on Ozark uplift Ab 148
Soils of Mo. Ab 153
Suggestions for Mo. corn growers Ac 19
Ten lessons on the study of Indian corn Br 1
Testing cow peas Ac 53
Missouri corn growers Ac 19
Missouri geography Bed 4
Missouri geology S v. 1 No. 3
Ss v. 3 No. 1
Ben No. 19
Missouri housekeeper's conference assn. Ac 30
Missouri granites Ben 14
Missouri procedure by rules of court Bl 13
Missouri stone and gravel Ben v. 2 No. 3
Missouri University serial publications Blib 6, 9
Mitchell, O. W. H.
Bacteria and disease Bm 1
Prevention of tuberculosis Bm 6
Water prevention of pollution Bm 7
Monroe doctrine Bos 2
Morlin, G.
An odius comparison Blit 2
Moulton, C. R.
Composition of beef animals Ar 30
Composition of bovine at birth Ar 38
Mulching Abc 4
Muns, W. E.
Headache Bm 11
Mumford, F. B.
Breeding experiments with sheep Ab 53
Commercial fertilizers Ab 63
Factors in beef production Ac 12
Farm adviser Ac 59
Fattening cattle on blue grass pasture Ab 90
Forage crop rotation Ab 116
Missouri fertilizer law Ac 58
Plant propagation Ac 15
Pork production with forage crops Ab 95
Rational sheep feeding Ac 25
Rations for fattening western yearling sheep Ab 115
Music S v. 1 No. 3

Neuman, L. N.
Effects of heat on Mo. granite Ben 14
Newspapers
Building a circulation Bj 6
Missouri laws Bj 1
Missouri Intellingencer Bj 18
Newspaper efficiency Bj 10
Law and the newspaper Bj 15
Small town newspaper Bj 20
Newton, Guy D.
Energy necessary to shear steel Ben 20
Noyes, Guy L.
Relation of sight and hearing to early school life Bm 5
Nursery stock
Federal and state laws Ac 99
Nutrition Ar 24, 25, 26
Oats
Factors influencing the yield Ac 46
Test of varieties Ab 15
Observations of comets Ba 2
Observations of comets A Ba 3
Observations of comets B Ba 1
Observations of comets E Ba 4
Ohio shales Bs v. 2 No. 2
Oil and greases Ben v. 2 No. 2
v. 4 No. 2
v. 4 No. 4
Orchards
Feeding the orchard Ac 22
Planting a backyard orchard Acc 65
Protections against frost Ac 35

Olmstead, A. T.
Assyrian historiography Sos v. 3 No. 1
Ozarks
Forest conditions Ab 89
Grass investigation Ab 109
Soil management Ab 88

Palmer, L. S.
Carotin Ar 9, 10, 11, 12
Effects of feeding cotton seed products Ar 27
Influence of plane of nutrition Ar 24, 25

Lactochrome Ar 13
Preservation of milk Ar 34

Pancoast, Carrie L.
Farm kitchen Aec 12
Pickles and relishes Aec 35

Paquin, J. W.
Black leg Ab 12
Texas fever Ab 11 Abc 31

Paquin, P.
Contagious pleuro-pneumonia Abc 15
Glanders Abc 16, 33

Pastures
Bluegrass Ac 73
Management of bluegrass pastures Aec 66
Seeding Ac 68

Peach trees
Covering to protect buds Ab 16
Hardiness of peach buds Ac 31
Peach growing in Missouri Ab 38
Peach yellows Ac 4
Pruning trees Ab 55
Winter killing of peach buds Ab 74
Winter protection Ab 38

Pears
Blight Ab 16

Periodicals in library Blib 1, 2

Perpetuities in Missouri Bl 3

Photo engraving Bj 14

Photometric investigation Ba 7, 13, 20, 22, 23, 24

Philanthropy S v. 2 No. 2

Physics Bs 3

Pickles
Pickles and relishes Aec 35

Pickling fruits and vegetables Aec 88

Plants
Killing of plant tissue Ar 8
Rest period Ar 1, 15, 16, 17, 21
Sap studies Ar 14
Plant propagation Ac 13, 14

Plows and plowing Abc 32

Poetry in high school Bed 4

Pope, Jesse E.
Clothing industry of N. Y. Sos v. 1

Potatoes
Growing late potatoes Ac 95
Potatoes Ab 16, 12
Sweet potatoes culture in Missouri Ac 103
Potato culture Aec 64
Potato growing Ab 33

Potter, Peter
Topography of thorax Ss v. 1 No. 1

Poultry
Farm poultry house Ab 107
Feeding baby chicks Ac 91
How to cull farm hens Aec 70
How to breed good layers Aec 72
Judging chickens Aec 8
Missouri conoly brooder house Aec 74
Meat scraps and sour milk Ab 155
Poultry house Ac 76, 80, 93
Profits from farm poultry Aec 84
Protein feeds for laying hens Ac 82
Saving summer eggs Aec 78
Sour milk for chicken feeding Ac 79
Story of a backyard flock Aec 26
White diarrhea Aec 85
Winter eggs Aec 59

Powell, J. B.
Building a circulation Bj 6
Newspaper efficiency Bj 10

Preventive medicine Bm 8

Production
Cost Ab 125

Property
Executory limitations Bl 11
Personal Bl 4
Real Bl 4

Pyle, W. H.
Abnormal and defective children Bex 9
Manual of mental and physical exams Bex 21, 29

Ragsdale, A. C.
Official testing of dairy cows Ac 96
Profitable dairy herds thru cow testing Aec 43

Rape
Growing rape Aec 3

Ravenel, M. P.
House fly Bex 11
Preventive medicine Bm 8

Reavis, G. W.
Grain judging for boys' and girls' clubs Aec 58

Record, S. J.
Forest conditions of the Ozarks Ab 89

Reed, Geo. M.
Powdery mildews Ar 23
Resistance of oats to mildew Ar 37

Reed, H. S.
Planting and care of trees Ac 17
Three fungous diseases of ginseng Ab 69
Reed, O. E.
Capacity of silos Ab 164
Reese, H. M.
Astronomy Bs v. 1 No. 5
Religious belief Sos v. 2 No. 1
Remainders, transfer and partition Bl 14
Resuscitation Bm 4
Rinkle, L. G.
Cottage cheesemaking Aec 50
Farm cheesemaking Aec 30
Roberts, R. W.
Road making properties of Missouri stone Ben v. 2 No. 3
Robinson, Mary E.
Economical selection of clothing Aec 83
How to select and store household linens Aec 44
How to pad dress form Aec 82
How to save sugar Aec 47
Principles of sewing Aec 41
Sewing processes Aec 89
Rodhouse, T. J.
Water resources of Missouri Ben 15, 22
Ross, C. G.
Deskbook Bj 12
News in the country paper Bj 4
Ross, P. H.
Emergency agricultural agent Aec 40
Rosa, J. T. Jr.,
Growing tomatoes Ac 87
Growing late potatoes Ac 95
Potato culture Aec 64
Profitable tomato fertilizers Ab 169
Storing vegetables Aec 53
Sweet potato culture Ac 103
Root, Addie
Canning by cold pack method Aec 9, 52
Drying fruits and vegetables Aec 23
Garment making club Aec 91
Making light bread Aec 11
Making simple wash dresses Aec 57
Rural schools Bed 11
Rural school consolidation Bed 2
Sanborn, J. W.
Corn fodder as stock food Abc 11
Corn harvesting Abc 22
Feeding for lean meat Abc 14, 19
Feeding ensilage Ab 8
Feeding hogs Abc 1
Feeding for flesh Abc 27
Feeding steers Abc 2
Feeding wheat and corn Abc 7
Fertilization Abc 30
Good roads Abc 13
Grasses for pasture Abc 35, Ab 2
Grasses for pastures Ab 2, Abc 35
Grass-fed pigs Abc 9
List of tillage implements Ab 4
Green vs. dry storage fodder Ab 7
Maintenance ration for pigs Abc 28
Meal feeding Abc 8
Mulching Abc 4
Pig feeding experiments Abc 10
Plows and plowing Abc 32
Rotation of crops Abc 29
Relation of tillage to soil moisture Abc 5
Relation of dew to soil moisture Abc 6, 23
Seed potatoes Abc 12
Test of varieties of wheat Abc 3
Sanctuary in England S v. 1 No. 5
San Jose scale Ab 41, 98, Ac 3
Control Ab 132, 161
Sanitation Ben v. 1 No. 3

Schweitzer, P.
Analysis of commercial fertilizers Ab 66, 70
Breeds of beef cattle Ab 24
Composition of flesh of cattle Ab 25
Feeding tests Ab 28
Feeding wheat to pigs Ab 29
Life history of corn Ab 9
Missouri coals Ben v. 2 No 1
Soil, weather field trials winter corn Ab 5
Soils and fertilizers Ab 19, 20
Schools consolidation Bex No. 3
School improvement agencies Bex 1
Scholarship records Bed 8
Scott, F. N.
Congress of letters Blit 1
Science unity Bs 1
Sears, F. H. Ba
Selbert, Mrs. L.
Colds Aec 79
Care of free text books Bex 7
Severance, H. O.

Checklist of official serial pubs. Blib 6, 9
Handbook of the libraries Blib 3
Library primer Blib 7
List of periodicals currently received Blib 2
Opening exercises new library building Blib 8
Partial billiography and index to agricultural pubs. Blib 5
Standard library organization Bed 13
Sewage disposal Ben v. 1 No. 3
Aec 71
Sewing
Principles Aec 41
Sharp, H. N.
Firing tests of Missouri coal Ben v. 3 No. 2
Shearing steel Ben 20
Sheep
Advantages of pure bred ram Ac 65
Breeding Ab 53
Docking and castrating lambs Ac 61
Keep sheep for profit Aec 67
Rational sheep feeding Ac 25
Rations for breeding ewes Ab 120
Stomach worms Aec 87
Silage
Corn silage Ab 112
For horse and mules Ac 72
Silage Ab 8 Ar 22
Silos and silage Aec 32
Silos Ab 103
Capacity Ab 164
Estimating silo capacity Ac 89
Filling the silo Aec 5
How to build a gurlo silo Ac 67
Plastered or gurlo silo Ac 48
Reinforced concrete silo Ac 49
Silo its use Ab 133
Silos and silage Aec 32
Silverman, L. L.
Definition of sum of divergent series Sm 1
Simpson, S. T.
Community live stock breeding Aec 33
Silos and silage Aec 32
Winters feed supply Aec 55
Smith, Herbert
Making the printed picture Bj 14
Social survey Bos 3
Soil
Control of soil washing Ac 78
Fertility Ac 69
Keeping soil productive Ac 102
Maintaining soil fertility Ac 38
Soil inoculation for legumes Ac 86
Soil investigations Ab 119, 126, 127, 128, 129, 130, 148, 153
Soil Br 2
Soils of the Ozark region Ar 3
Soils and fertilizers Ab 19, 20
Soil experiments on upland loam Ab 84
Soil experiments on prairie silt loam Ab 84
Soil experiments on rolling limestone Ab. 86
Soil management in Ozarks Ab 88
Soil of Sullivan Co., Ab 92
Soil of Audrain Co., Ab 93
Soule, A. M.
Dairy management Ab 26
Soy beans
Way to grow Aec 20, 75
Spalding, F. P.
Country roads Bex 15
Spence, E. L.
Prevention of Malaria Bm 10
Spencer, D. A.
Cooperative wool marketing Aec 76
Keep sheep for profit Aec 67
Spraying
Apple trees Ab 27
Cattle Ab 3
Codling moth Ab 13
Cooperative spraying demonstration Aec 92
Instruction for spraying Ac 34
Orchards and vineyards Ab 31
Spray calendar Ab 30, Ac 70
Spray nozzles Ab 50
Stanley, Louise
Cooking of vegetables Aec 1
Feeding the baby Bex 24
Preservation of food Bex 6
Stedman, J. M.
Chinch bug Ab 51
Fruit tree leaf roller Ab 71
Fruit tree bark beetle Ab 44
Frinzed wing apple bud moth Ab 42
Hessian fly in Missouri Ab 62
Lesser apple leaf folder Ab 36
San Jose scale Ab 41
"Sting" in the apple Ab 64
Tarnished plant bug Ab 46
Strawberry falseworm Ab 54

Wooly-aphis Ab 35, Ac 7
Steele, Mary I.
Regeneration of cray fish appendages S v. 2 No. 4
Stephens, E. W.
The "Missouri Intelligencer" Bj 18
Stephens, F. F.
The Monroe doctrine Bos 2
Transitional period Sos v. 2 No. 4
Stewart, Caroline T.
Werewolf superstition Sos v. 2 No. 3
Stewart, O. M.
Physics Bs v. 1 No. 3
Stock subscription agreements Bl 9
Strawberries Ab 17
Commercial fertilizers Ab 113
False worm Ab 54
Seedling Ab 22
Tests Ab 16
Sub-soiling Abc 17
Sudan grass
Way to grow Aec 22
Sugar how to save Aec 47
Sugar beets Ab 17, 40, 45, Ac 5
Sullivan, K. C.
Dipping and fumigating nursery stock Ab 177
Plant inspection in Missouri Ac 101
Swett, W. W.
Factors influencing growth Ar 31
Raising calves Ac 88

Talbert, T. J.
Control of important garden insects Aec 15
Cooperative spraying demonstration Aec 92
Spray in apple orchards Ab 161
Tarr, W. A.
Barite deposits of Missouri Ss v. 3 No. 1
Effects of heat on Missouri granites Ben 14
Taylor, C. C.
Social survey Bos 3
Ashland community summary Ab 173
Texas fever Ab 11, 37, 48, Abc 31
Text books Bex 7
Thilly, Frank
Process of inductive inference S v. 2 No. 3
Tillman, B. W.
Liming for clover Aec 61
Timothy plant Ar 19, 20
Tomatoes for the cannery Ac 87
Topography of thorax Ss v. 1 No. 1
Tort liability Bl 7, 12
Townsley, T. S.
How to cull farm hens Aec 70
How to breed good layers Aec 72
Missouri colony breeder house Aec 74
Profits for farm poultry flocks Aec 84
Saving summer eggs Aec 78
Winter eggs Aec 59
Tracy, S. M.
Plants and their uses Abc 21
Transplanting Ar 33
Treatment of personality Sp 1
Trees
Pruning shade trees Ac 81
Trees for the lawn Ac 17
Tree borers Ab 44
Trenholme, N. M.
Right of sanctuary S v. No. 5
Trowbridge, E. A.
Corn versus oats for work mules Ab 114
Feeding and care of horses Ac 27
Purebred livestock Aec 63
Rations for fattening sheep Ab 115
Silage for horses and mules Ac 72
Trowbridge, P. F.
Composition of beef animals Ar 30
Effect of limited food on growth Ar 28
Farmers beef club Ac 85
Hog butchering and pork curing Aec 42
Inspection of commercial fertilizers Ab 78, 80, 82, 85, 91, 99, 109, 116, 122, 139, 145, 154, 160
Maintenance requirement of cattle Ar 18
Studies of timothy plant Ar 20
Tuberculosis prevention Bm 6
Tucker, Geo. M.
Corn improvement for Missouri Ab 59
Turner, C. W.
Official testing of dairy cows Ac 96
Tyler, E. E.
Farm beekeeping Ab 138
Typhoid fever prevention Bm 2

Universities English Sos v. 2 No. 2
U. S. History Sos v. 2 No. 4
Variable stars Ba 8-11, 13-19, 22, 23.

Vaughn, E. V.
English universities Sos v. 2 No. 2
Veblen, T.
Blonde race Bs v. 2 No. 3
Vegetables
Storing Aec 53
Vetch
Hairy vetch Aec 2
Vivien Chevalerie Vivien Sl 1
Covenant Vivien S v. 1 No. 2
Wagons Ab 39, 52

Washburn, R. M.
Farmer's creamery Ac 18
Water prevention of pollution Bm 7
Water resources Ben v. 4 No. 3, also 15, 22
Water supply Ben v. 1 Nos. 2 and 23
Water systems for farm homes Aec 49
Waters, H. J.
Beef production Ac 24
Clover and cow peas Ac 6
Corn as stock food Ac 11
Fattening cattle Ab 76
Field exp. with corn Ab 14
Field experiments with corn Ab 32
Green forage for hogs Ab 79
Influence of width of tire on draft of wagons Ab 39
Inspection of commercial fertilizers Ab 77
Manures and fertilizers Ab 34
Studies of timothy plant Ar 19
Sugar beet Ab 40, 45, Ac 5
Wheat and oats test Ab 15
Wintering yearling cattle Ab 75
Watson, J. G.
Filling the silo Aec 5
Weaver, L. A.
Feeding wheat to fattening swine Ab 136
Forage crop rotations Ab 110
Forage crops for swine Ac 55
Hogging down corn Aec 37
Self feeders for fattening Ab 144
Weeks, Raymond
Covenant viviens S 2
Chevalerie viviens Sl 1
Weinbach, M. P.
Comparative tests of cylinder-oils Ben v. 4 No. 2
Werewolf superstition Sos v. 2 No. 3
Westcott, A. L.
Friction tests of lubricating greases and oils Ben v. 4 No. 4
Steam boiler trials Ben v. 3 No. 3
Wheat
Feeding to pigs Ab 29
Fertilizer Aec 28
Field experiments Ab 21
Growing wheat in Missouri Aec 29
Some factors in wheat production Ac 56
Test of varieties Ab 15
Wheat growing in Missouri Ac 43
Wheat and corn Abc 3, 7
Whitten, J. C.
Apple orchard Ab 49
Apple growing in Missouri Ab 61
Asparagus Ab 43
Home vegetable garden Ac 83
Grapes Ab 46
Missouri apple growing Ac 32
Peach yellows Ac 4
Planting a backyard orchard Aec 65
Pruning peach trees Ab 55
Spraying orchards Ab 31
Time of planting vegetables Aec 21
Transplanting Ar 33
Winter protection of peach Ab 38
Wiggins
Fruitfulness of apples Ar 32
Williams, W.
Missouri laws affecting newspapers Bj 1
World's journalism Bj 9
Williams, W. S.
Roadmaking properties of Missouri stone Ben v. 2 No. 3
Willson, C. A.
Feeding swine Ac 28
Windsor, Wenona
How to cook soybeans Aec 44
War breads Aec 25
Wood, D. C.
Milk production costs Ab 156
Wooly-aphis Ab 35, Ac 7
Wright, F. L.
Raising pigs Aec 77
Writ of certiorari Bl 6, 13

Young, Daisy
Implantation of glochidum on the fish Bs v. 2 No. 1

Zeits, Juliaetta
Handwork in the grades Bex 16

Zoology experimental Bs 8
Evolutional Bs 9

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 22, NUMBER 16

LIBRARY SERIES 11

List of Periodicals Currently Received by the University Library

ISSUED THREE TIMES MONTHLY; ENTERED AS SECOND-CLASS MATTER AT THE POSTOFFICE AT COLUMBIA, MISSOURI—500

MAY, 1921

PREFACE

This list includes periodicals which are being received in 1921. Many of our periodicals ceased publication during the war; of the others, many were gifts which publishers were unable to continue sending owing to the advance in cost of materials and labor. Annual publications and continuations have not been included. The list is intended to facilitate the location of titles in our large and important collection of current periodical literature. The library is receiving approximately 2000 periodicals. The second part of the bulletin contains the list of periodicals currently received in the branch libraries and laboratories.

The following abbreviations are used to denote locations:

Ag.—Agricultural library
B—Biological library
D—Dairy
E—Engineering library
H. E.—Home economics office
J—Journalism library
L—Law library
M—Medical library
O—Observatory

No abbreviations follow titles which are shelved in the General library.

HENRY O. SEVERANCE
April 14, 1921

A List of Periodicals Currently Received by the Libraries.

Abo akademi. Acta humaniara
Abstracts of bacteriology.
Academia de ciencias med. fis. y naturales de Havana. Anales. Revista cientifica.
Academia de ciencias exactas fisicas y naturales, Madrid. Revista.
Academia das ciencias de Lisboa,
Boletin bibliografico.
Classe de ciencias. Boletin
Class de historia e memorie
Journal de ciencias mat.
Academia national de ciencias, Cordoba. Boletin.
Academia polytecnica do Porto. Annaes cientificas.
Academie des sciences. Paris. Comptes rendus.
Academie royale de Belgique. Bulletin de la classe des lettres.
Academie royale de Belgique. Bulletin de la classe des sciences.
Academy notes.
Academy of natural sciences of Philadelphia. Proceedings.
Academy of political science. Proceedings.
Academy of science of St. Louis. Trans.
R. Accademia d scienze d. istituto di Bologna. Rendiconti, class sci morali.
R. Accademia d. scienze d. istituto di Bologna. Memorie scienze guirdiche. Memorie, scienze classe storico-filologiche.
Accountant
Acta mathematica.
Acta medica Scandanavica. M.
Acta zoologica B.
Actuarial society of America. Trans.
Adelphian of alpha delta pi
K. Akademie d. Wiss. Berlin. Abhandlungen, phys-math. klasse.
K. Akademie d. Wiss. Berlin. Abhandlungen, phil-hist. klasse
K. Akademie d. Wiss. Wein. Sitzenberichte, math-natur. klasse
K. Akademie d. Wiss. Wien. Sitzenberichte. phil-hist. klasse
Advertisers' weekly. J.
Advertising and selling. J.
Advertising world. J.
Advocate of peoce
Aerial age. E.
Aglaia
Agricoltura ferrarese. Ag.
Agricultural and industrial progress in Canada.
Agricultural engineering. Ag.
Agricultural gazette of Canada. Ag.
Agricultural gazette of New South Wales. Ag.
Agricultural Index. Ag.
Agricultural journal of India. Ag.
Agricultural journal of Japan (in Japanese). Ag.
Agricultural review. Ag.
Agrimotor. Ag.
Alabama girls technical institute. Bulletin.
Alabama. Geological survey. Leaflet. Bulletin
Alba agricola. Ag.
Alberta. Poultry bulletin.
Allgemeine zeitung
Alpha gamma delta
Alpha phi quarterly
Alumni quarterly. University of Ill.
Ambition
America at work
American academy of arts and sciences. Boston. Memoirs & proc.
American academy of pol. & soc. science. Annals
American anatomical memoirs. M.
American anthropological assn. Memoirs
American anthropologist
American art news
American artisan and hardware record
American association of cereal chemists. Journal. Ag.
American association of university professors. Bulletin
American astronomical society. Pubs.
American bar association. Journal. L.
American blacksmith. E.
American breeder. Ag.

American builder
American catholic historical society. Records
American catholic quarterly review
American chemical society. Journal
American child
American city. Cop. 2. Ag.
American cookery
American cooperation journal. Ag.
American co-operative manager. Ag.
American digest (advance sheets) L.
American economist
American economic review
American electrical engineers. Journal. E.
American electro chemical society. Trans. E.
American engineering
American entomological society. Trans.
American farming. Ag.
American federationist
American fertilizer. Ag.
American florist. Ag.
American forestry
American fruit grower. Ag.
American gas journal
American hellenic society. Pubs.
American hereford journal. Ag.
American historical review
American industries
American institute of criminal law. Journal
American institute of electrical engineers. Proceedings. E.
American institute of metals. Quarterly journal
American international college notes
American international corporation. Bulletin.
American issue
American journal of anatomy. M.
American journal of archaeology
American journal of international law. L.
American Jewish historical society. Publications
American journal of botany. B.
American journal of diseases of children
American journal of mathematics
American journal of nursing. M.
American journal of pharmacy. M.
American journal of physical anthropology
American journal of philology
American journal of physiology. M.
American journal of psychology
American journal of public health
American journal of science
American journal of semitic languages, and literature
American journal of the medical sciences. M.
American journal of sociology
American primer of tropical med. M.
American judicature society. Journal. L.
American labor legislation review
American law review. L.
American law school review. L.
American library association. Bulletin
American lumberman
American machinist. E.
American magazine
American magazine of art
American mathematical monthly
American mathematical society. Bulletin
American mathematical society. Trans.
American medical association. Journal. M.
American microscopical society. Trans. B
American midland naturalist
American miller. Ag.
American mineralogist
American monthly review of reviews
American museum journal
American museum of natural history. Anthropological papers
American museum bulletin
American naturalist
American news trade journal. J.
American oxonian
American philosophical society. Proceedings
American physical education review
American pigeon journal. Ag.
American Poland China record. Ag.
American Polish chamber of commerce. Journal
American political science review
American pomological society. Bulletin
American poultry advocate. Ag.
American printer. J.
American railroads
American railway ass'n. Bulletin
American reporter-adv. sheets. L.
American Scandinavian review
American school board journal
American sheep breeder. Ag.
American society of agronomy. Journal

American society of civil engineers. Trans. E.
American society of heating and ventilating engineers. Journal. E.
American society of mechanical engineers. Journal E. (continued as mechanical engineering)
American society of refrigerating engineers. Journal. E.
American society for testing material. Proc. E.
American squab journal. Ag.
American statistical association. Publications
American swineherd. Ag.
American veteinary med. ass'n. journal. Ag.
American waterworks. Ass'n. journal. E.
Amherst college bulletin
Amherst graduates quarterly
Anales de ingenieria. Bogota. E.
Analyst
Anatomical society of Great Britain & Ireland. Proc. (In journal of anat. & physiol.)
Anatomische hefte. M.
Anatomischer anzeiger. M.
Anchora of delta gamma
Anglia
Anglia. Beiblatt
Anglistische forschungen
Annalen der chemie. (Liebig's)
Annalen der physik
Annalen der physik. Beiblatter
Annales de chimie
Annales de la science agronomique. Ag.
Annales de medicine. M.
Annales de physique
Annales des sciences naturelles. Botanique. B.
Annales du midi
Annales mycologici. B.
Annali di matematica
Annalist
Annals of applied biology. B.
Annals of Botany. B.
Annals of Iowa
Annals of mathematics
Annals of surgery. M.
Arcetri. Osservatorio. Pub.
Architectural forum
Architectural record
Architecture and building
Archiv for nordsk filologi
Archiv für anato. and physiologie. M.
Archiv für das studium der neueren sprachen
Archiv für die gesammte physiologie. M.
Archiv für die gesammte psychologie
Archiv für entwickelungsmechanik der organismen. B.
Archiv für exper. path. u. pharmakologie. M.
Archiv für Frankfuter geschichte und kunst
Archiv für geschichte der philosophie
Archiv für hygiene. M.
Archiv für kinderheilkunde. M.
Archiv für mikroskopische anatomie. M.
Archiv für offentliches recht
Archiv füer klinische chirurgie. M.
Archiv für path. anat. u. physiologie. M.
Archiv für protistenkunde. B.
Archiv für rassen u. gesellsch. biologie
Archiv für systematische philosophie
Archiv für zellforschung. B.
Archives de biologie
Archives de med. exper. and path. M.
Archives de psychologie
Archives de zoologie experimentale B.
Archives de zoologie. Notes et revue. B.
Archives des malades du coeur. M.
Archives des sci. physiques et naturelles
Archives int. de pharmacodynamie. M.
Archives internationales de physiologie. M.
Archives italiennes de biologie. M.
Archives neerlandaises des sciences
Archives neerlandaises des physiologie. M.
Archives of internal medicine. M.
Archives of psychology
Archivio di farmacologia sperimentale. M.
Archivo di fisiologia. M.
Archivio Italiano di anatomia. M.
Arizona. Normal school. Tempe. Bulletin
Arizona teacher
Arizona. University. Record
Arkansas. University. Bulletin
Arkiv fur botanik. B.
Arkiv fur matematik astronomi och fysik.
Arkiv fur zoologie. B.
Army and navy journal
Arrow of pi beta phi

Art in America
Arts and decoration
Asia. Cop. 2. J.
Association men
Association of collegiate alumnae
Association of official agricultural chemists. Journal
Astronomical journal. O.
Astronomische nachrichten. O.
Astrophysical journal
Atlanta university. Publicationa
Atlantic reporter. (advance sheets) L.
Athenaeum. Merged in nation. London.
Atlantic monthly. cop. 2. J. cop. 3. E.
Auburn seminary record
Augustana college and theological sem. Pubs.
Australian forestry journal
Automobile dealer and repairer. E.
Automotive industries. E.
Auto review. E.
Avenue
Aviation. E.
Ayrshire quarterly. Ag.

Bacon hog. Quarterly. Ag.
Baker & Taylor company's monthly bulletin
Banker's magazine
Barge canal bulletin
Baseball magazine
Balkan economist
Balkan review
Bates college bulletin
K. Bayerische akad. d. wiss. Munchen. Sitzenb. phil.-host. klasse
K. Bayerische akad. d. wiss. Munchen. Sitzenb. math.-phys. klasse
Baylor university. Bulletin
Bee hive
Behavior monographs
Beitrage zur geschichte der deutschen sprache
Beitrage zur geschichte d. philos. des mittelalters
Beitrage zur path. anat. M.
Belgium minister of colonies. Renseignement
Belgium. Statistics. Bulletin
Berkshire world. Ag.
Berliner klinische wochenschrift. M.
Berliner philologische wochenschrift. contin as philologische wochenschrift
Besançon. observatoire national. Bulletin chronometrique
Better business. Ag.
Better farming. Ag.
Better fruit. Ag.
Bible college of Missouri. Bulletin
Biblical review
Bibliographical society of America. Papers.
Bibliographie anatomique. M.
Bibliographia zoologica. B.
Bibliotheca philologica classica
Bibliothek für philosophie
Bibliotheca sacra
Biedermann's zentralblatt fur agrikultur chemie. Ag.
Bio-chemical journal
Bio-chemische zeitschrift
Biological bulletin. B.
Biologisches centralblatt
B'Nai B'rith news
Biometrika. B.
Blacksmith's journal
Blackwood's Edinburgh magazine
Book review digest
Booklist
Book of Terre Haute
Bookman
Bookseller
Boston health dept. Bulletin
Boston public library bulletin
Boston medical and surgical journal. M.
Boston museum of fine art. Bulletin
Boston society of natural history. Ocasional papers
Boston society of natural history. Proceedings
Boston university. Bulletin
Botanical abstracts. B.
Botanical gazette. B.
Botanical magazine. B
Botanical society of Edinburgh. Trans. B.
Botanische zeitung. B.
Botanischer jahresbericht. B.
Botanisches centrablatt B.
Botanisches centralblatt. Beihefte. B.
Bowdoin college. Bulletin
Boys' and girls' farm club leader. Ag.
Brain. M.
Brazil agricultura indutria e commercio. Boletin
Brazil. Geologico e mineralogico. Monographias

Breeders gazette. Ag.
Bricklayer, mason and plasterer
Bridgemen's magazine
Brill magazine
British and colonial prize cases. L.
British food journal
British journal of surgery. M.
British journal of psychology
British medical journal. M.
British printer. J.
Bronn klassen u ordnungen d. tier-reichs. B.
Brooklyn botanical garden. Leaflets
Brooklyn botanical garden. Record
Brooklyn institute of arts & sciences. Science bulletin
Brooklyn museum quarterly
Brooklyn public library. Bulletin
Brown university. Bulletin
Brownings magazine
Brussels. Jardin botanique. Bulletin
Bryn Mawr college. Monographs
Budget
Buenos Aires. Museo nacional. Anales
Buenos Aires. Universidad. Revista
Buffalo society of natural sciences. Bulletin
Buffalo. University. Studies
Building age. E.
Building farm trade. J.
Bulletin astromomique
Bulletin des sciences mathematiques
Bulletin de correspondance hellenique
Bulletin of bibliography
Bulletin protestant Francaise
Bureau of railway economics. Bulletin
Business. J.
Business personnel
Butchers advocate. Ag.
Burlington magazine

Caduceus of kappa sigma
California. University. Bulletin
California. University. Library bulletin
California. University. Publications—
Agricultural science
Classical philology
Economics
Engineering
Entomology dept. bulletin
Geology dept. bulletin
Library bulletin
Psychology
Scripps institute. Research bull.
California academy of sciences. Proceedings
California board of health. Bulletin
California cultivator
California horticultural commission. Monthly bulletin
California industrial accidents comm. Bulletin
California law review. L.
California petroleum and gas. dept. Summary of operations
California state library. News notes of California libraries
California state prison. Bulletin
California taxpayers journal
California university chronicle
Cambridge philosophical society. Proceedings
Cambridge university observatory. Astron. Observations
Campaign against tuberculosis in Iowa
Canada. Census and statistics monthly
Canada. Dominion observatory. Publications
Canada. Entomological branch
Bulletin
Circular
Crop protection leaflets
Canada. Forestry branch. Bulletin
Canada. Fruit crop report
Canada. Geological survey. Memoirs. Mines branch
Canada. Geological survey. Museum bulletin
Canada. Geological survey. Bulletin. Mines branch
Canada. Geological survey. Report
Canadian entomologist
Canadian forestry journal
Canadian forestry magazine
Canadian horticulturist. Ag.
Canadian railway club. Official proc. E.
Canadian society of civil engineers. Trans. E.
Canner
Cape of Good Hope observatory. Annals
Carnegie endowment for international peace. Pubs.
Carnegie foundation for adv. of teaching. Bulletin
Carnegie institute. Washington. Publications

Carpenter
Cartoons. J.
Case & comment. L.
Catholic charities review
Catholic historical review. Wash.
Catholic university. Bulletin
Catholic world
Cavalry journal. Ag.
Cellule. B.
Cement & engineering news. E.
Central law journal. L.
Centralblatt fur allgemeine pathologie. M.
Centralblatt fur bakterologie. Abth 1. Referate. M.
Centralblatt fur bakterologie. Abth 1. Originale. M.
Centralblatt fur bateriologie. Abth. 2
Centralblatt fur die medicinischen wissenschaften. M.
Centralblatt fur mineralogie und palaeontologie
Centralblatt fur physiologie. M.
Centro de cultura scientifica. Revista. Pelotas. Brazil
Century. Cop 2. E.
Charity organization review
Chase economic bulletin
Chemical abstracts
Chemical & metallurgical engineering. E.
Chemical news
Chemical society. London. Transactions & abstracts
Chemiker-zeitung
Chemisches zentralblatt
Chester white journal. Ag.
Chester white post. Ag.
Chicago art institute. Bulletin
Chicago dairy produce. Ag.
Chicago institute of medicine. Proceedings
Chicago municipal tuberculosis sanatorium. Bulletin
Chicago pathological society. Trans. M.
Chicago public library. Book bulletin
Chicago school of civics and philanthropy. Bulletin
Chicago school of sanitary instruction. Bulletin
Chicago. University. Quarterly announcements
Chicago. University. Yerkes observatory. Pubs. O.
Chicago university record
Child
Chile. Universidad. Anales
Chilton tractor journal. Ag. Cop. 2. E.
Chinese students monthly
Christian evangelist
Christian herald. J.
Christian observer
Christian register
Christian missionary
Christian socialist
Christian workers' magazine
Chronique des arts
Church herald
Cigarmaker's official journal
Cincinnati public library. Leaflet
Cincinnati. Observatory. Publications
Cincinnati sanitary bulletin
Cincinnati. University. Bulletin
Cincinnati. University record
Cincinnati. University. Studies
Circolo matematico di palermo. Rendiconti
Citator. Missouri edition. L.
City and state
City record. Cleveland
Clark college record
Clarkson bulletin
Classical journal
Classical philology
Classical quarterly
Classical review
Classical weekly
Clay Robinson live stock report. Ag.
Collier's national weekly. Cop. 2. J.
Coenobium
Cold
Colgate university Publications
Colorado alumnus
Colorado college publications
- Bulletin series
- Education and psychology ser.
- Language series
- Science series
- Social science series

Colorado college. Studies
Colorado scientific society. Proceedings
Colorado fuel and iron co. Industrial bulletin
Colorado school of mines. Quarterly
Colorado university. Bulletins
Colorado. University. Studies
Colour
Coltivatore. Ag.

Columbia university. Adams fund publications
Columbia university. Bulletin of information
Columbia university. Teachers college. Contributions
Columbia university. Astron. Obs. Contributions. O.
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Columbian review
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Commercial fertilizer. Ag.
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Commercial and financial chronicle
Congo Belge. Bulletin officiel
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Concrete highway engineer. E.
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Connecticut academy of arts and sciences. Memoirs
Transactions
Connecticut. Education board. Bulletin.
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Conservation
Constitutional review
Co-operator. L.
Coopers' international journal
Copenhagen. Observatory. Publications
Cornell civil engineer. E.
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Studies in English
Corporation journal
Costume royale. H. E.
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Country gentlemen. Ag. Cop. 2. J.
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Crisis
Cumulative book index
Current opinion

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Dearborn independent
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Denver. University. Bulletin
Depauw university. Bulletin
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Deutsch. Amerikanische farmer. Ag.
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Deutsche landwirtschftliche presse. Ag.
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Deutsche mathematike vereinigung. Jahresbericht
Deutsche medizinische wochenschrift. M.
Deutsche phys. Gesellschaft. Berichte
Deutsche rundschau
Deutsche zeitschrift fur chirurige. M.
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K. Deutsches archaeologisches institut. Mitteil. Athen abt.
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Diagonal
Dial
Dialect notes
District of Columbia. Public library. Bulletin
Docket. L.
Dog fancier. Ag.
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Drake university. Studies
Drama
Dramatist
Drygoodsman
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Ecole polytechnique. Journal
Ecology
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Economic journal
Economist
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Edinburgh review
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Educational briefs
Educational news bulletin
Educational record
Educational review
Educational times
Electric journal. E.
Electric railway journal. E.
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Electrician. E.
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Eleusis of chi omega
Elgin dairy report. Ag.
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Engineers' club of Philadelphia. Proc. E.
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Enseignement mathematique
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Entomological news
Entomologist
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Entomologist's record
Ephemeris archailogike
Ergebnisse der anatomie. M.
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Estudante Brazileiro
Eugenics review
Euphorion
Evansville college. Bulletin
Evaporator
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Expositor
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Express messenger

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Farm and home. Ag.
Farm implement news. Ag.
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Flora. B.
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Jahrbucher fur nationalokonomie und statistik
Jahrbucher fur wissenshaftliche botanik. B.
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Jahresbericht u d. fortschritte d. klassische. alterthums wissenschaft
Jahresbericht uber d. fortschritte der physiologie. M.
Jahresbericht uber die fortschritte der anatomie u. entwick. M.
Jahresbericht uber die fortschritte der geburtshilfe u. gynakologie. M.
Jahresbericht uber die erschein u. d. gebiete d. germ-philol.
Jahresbericht uber die fortschritte der agrikultur-chemie. Ag.
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Jayhawk
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Journal of entomology & zoology
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Journal of philosophy
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Judicious advertising. J.
Juvenile (formerly juvenile court record)

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Kantstudien
Kappa alpha theta
Kasan. Astron. obs. Contributions. O.
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Kentucky education dept. Bulletin
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Kentucky. University. Bulletin
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Kitasato archives of experimental med. M.
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Ladies' home journal
Lancet. M.
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Landwirtschaftliche versuchstationen
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Law and labor
Law notes. L.
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League of nations. Treaty series
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Leeds. University. Publications
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Leghorn world. Ag.
Leland Standford, Jr. university. Pubs.
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Library log
Liberty
Library
Library journal
Library occurrent
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Liebig's annalen der chemie. See annalen der chemie
Lilly scientific bulletin
Lindenwood college. Bulletin
Literarisches echo
Literarisches zentralblatt fur Deutschland
Literary digest. Cop. 2 J. Cop. 3. E.
Literaturblatt fur germanische und romanische philologie
Little theater review
Live stock journal (London). Ag.
Living age
Lloyd library bulletin
Locomotive engineers. Journal
Locomotive fireman's magazine
London, Edinburgh and Dublin philosophical magazine
London mathematical society. Proceedings
London quarterly review
Louisiana. Dept. of conservation. Bulletin
Louisiana. University. Bulletin
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Lumber
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Lumber world review
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News Bulletin
Circular
Leaflet
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Man
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Mass. Health dept. Commonwealth bulletin
Mass. Board of education. Bulletin
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Mathematical gazette
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Meadville theological school. Quarterly bulletin
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Merck's report
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Missionary review of the world
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Astronomical series
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Extension series
General series
Journalism series
Law series
Library series
Literature series
Medical series
Science series
Social science series
Missouri. University. Studies—
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Missouri. University. Studies. Science series
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Motor age. E. Cop. 2. Ag. E.
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Muenchener medicinische wochenschrift
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Museum journal
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North Carolina. Geological survey. Economic papers
North Carolina. Health department. Bulletin
North Carolina. University. Extension leaflets
North Carolina. University. James Sprunt hist. monographs
North Carolina. University. Studies in philology
North Carolina high school journal. Contin. as high school journ.
North Dakota. Food dept. Special bulletin
North Dakota. Normal. Valley City. Bulletin
North Dakota. University. Journal
North Dakota. University. Bulletin
North woods
Northeastern reporter (advance sheets). L.
Northwestern reporter (advance sheets). L.
Northwest dairyman and farmer. Ag.
Northwest dairyman and horticulturist
Northwestern university. Bulletin
Norway. Norges officielle statistik
Norway. Statistiske central bureau. Meddelser
Norway. Statistiske central bureau. Maanedsopgaver
Notes and queries
Nova Scotia. Journal of education
Nuova antologia
Nouvelles annales de math.
Nuovo cimento

Observatory
Oekonom zeitung fur landwirtschaft. Ag.
Oesterreichisches archaeologisches institut. Jahreshefte
Official guide of the railways. J.
Office internationale d'hygiene publique. Bulletin
Ohara instituts f. landwirtsch. forschung. Berichte. Ag.
Ohio. Administration board. Pubs.
Ohio. Archaeological and historical quarterly
Ohio. Biological survey. Bulletin
Ohio bulletin of charities and corrections
Ohio educational monthly
Ohio farmer. Ag.
Ohio. Geological survey. Bulletin
Ohio. Industrial commission. Bulletin
Ohio journal of science
Ohio public health journal
Ohio. State institutions. Journal
Ohio. State academy of science. Proc.
Ohio state university. Bulletin
Oklahoma farmer. Ag.
Oklahoma. Geological survey. Bulletin
Oklahoma. University. Bulletin
Oklahoma. University. Studies
Omaha public library. Bulletin
Oologist
Open court
Open road
Operative miller. Ag.
l'Opinion
Oporto. Academia polytechnica. See Academia
Orange Judd farmer
Oregon. University. Bulletin
Oregon. University. Publications
Osteopathic magazine

Our dumb animals
Outing
Outlook. Cop. 2. E.
Ozark countryman. Ag.

Pacific dairy review. Ag.
Pacific reporter (advance sheets). L.
Pacific review
Padagogische studien
Pahasapa quarterly
Painter and decorator
Paix par le droit
Palaeontographica
Pan American union. Bulletin
Pan American union. Boletin
Panama. Boletin de estadistica
Panama canal record
Parasitology
Park and cemetery. Ag.
Park college record
Park museum. Bulletins
Patton's monthly. E.
Paysan Suisse. Ag.
Pedagogical seminary
Pennsylvania farmer. Ag.
Pennsylvania. Dept. of health. Bulletin
Pennsylvania. Labor and industry department. Bulletin
Pennsylvania state college. Bulletin
Pennsylvania. University. Bulletin
Pennsylvania. University. Contributions from the botanical lab.
Pennsylvania. University. Contributions from zoological lab.
Pennsylvania. University. Pubs. Astronomical series
Periodical
Petermann's mitteilungen
Petermann's mitteilungen. Ergänzungsband
Phillippine agricultural review. Ag.
Phillippine agriculturist. A.
Phillippine Island. Public works. Bulletin
Phillipine journal of science
Phillippine review
Phillips Exeter academy. Bulletin
Philologische wochenschrift
Philologus
Philosophical magazine
Philosophical review
Philosophical society of Glasgow. Proc.
Physical review
Physical society of London. Proc.
Physikalische berichte
Physikalische zeitschrift
Physiological abstracts. M.
Physiological researches
Phytopathology. B.
Pittsburgh. Carnegie library. Bulletin
Pittsburgh. Carnegie museum. Annals
Pittsburgh. Carnegie museum. Memoirs
Pittsburg. University. Bulletin
Playground
Poet lore
Poetry
Political review
Political science quarterly
Poona agricultural college. Reprints
Popular astronomy
Popular mechanics. E.
Popular science monthly
Porto Rico school review
Portrait
Potato magazine. Ag.
Power plant engineering. E.
Power. E.
Prairie farmer. Ag.
Pratt institute library. Quarterly booklist
Price current grain reporter. Ag.
Princeton seminary bulletin
Princeton university. Register
Princeton university. Biological lab. Contributions
Printers ink (monthly). J.
Printers ink (weekly). J.
Printing art suggestion book. J.
Printing art. J.
Progres agricole et viticole. Ag.
Progressive farmer. Ag.
Protectionist
Providence. Public library. Quarterly bulletin
Prussia. K. Geodatische institut. Veroffentlichung
Psychological bulletin
Psychological clinic
Psychological index
Psychological monographs
Psychological review
Psychologische studien
Public affairs information service. Bulletin
Public education association of Philadelphia. Studies
Public health
Public health journal
Public health news

Public health nurse
Public roads. Cop. 2. E.
Public libraries
Public opinion. J.
Public service. Bulletin
Public service monthly
Public utilities reports. L.
Public works. E.
Publishers weekly
Puget Sound marine station. Pubs.
Purdue university. Bulletin
Purdue university engineering societies. Pubs.
Pure products

Quarterly cumulative index to current med. lit. M.
Quarterly journal of economics
Quarterly journal of experimental physiology. M.
Quarterly journal of microscopical science. B.
Quarterly journal of pure and applied mathematics
Quarterly journal of speech education
Quarterly review
Queensland agricultural journal. Ag.
Queens quarterly
Queens university. Bulletin
Queens university. Bulletins of dept. of history and economics. etc.
Quellen und forschungen

Rabbit craft. Ag.
Radium
Radio review
Railroad red book
Railway age. E.
Railway maintenance of way employes. Journal
Railway mechanical engineer. E.
Railroad telegrapher
Railroad trainmen's journal
Railway carmen's journal
Railway conductor
Railway signal association. Journal
Rainbow
Readers guide to periodical literature
Readers guide to periodical literature. Supplement. (Contin. as international index)
Reclamation record. Ag.
Reconstruction. Vienna
Red Cross bulletin
Red Cross. S. W. division. Important items
Red polled journal. Ag.
Refrigeration. E. Cop. 2. Ag.
Reliable poultry journal. Ag.
Religious education
Remington notes
Rennes. Université. Travaux scientifiques
Retail clerks international advocate
Review of reviews
Review of economic statistics
Revista agricultura de Puerto Rico. Ag.
Revista agricola. Mexico. Ag.
Revista di agricoltura. Parma. Ag.
Revista economica
Revista di agricultura. Dominican republic. Ag.
Revista di agricultura. Santiago. Ag.
Revista industrial y agricola de Tucuman. Ag.
Revista Mexicana de deracho international
Revista sud Americana de endocrinologia. M.
Revue d'economie politique
Revue de metaphysique et de morale
Revue de philologie
Revue de philosophie
Revue des bibliotheques
Revue des deux mondes
Revue des etudes Grecques
Revue des langues romanes
Revue des questions historique
Revue des questions scientifiques
Revue du seizieme siecle
Revue du travail
Revue economique internationale
Revue generale de botanique. H.
Revue generale des sciences
Revue general de l'electricite. E.
Revue Germanique
Revue Hispanique
Revue historique
Revue horticole. Ag.
Revue internationale de sociologie
Revue pedagogique
Revue philosophique
Revue politique et parlementaire
Revue scientifique
Revue semestrielle des pub. Math.
Rheinisches museum
Rochester academy of sciences. Proc.

Rhode Island school of design. Bulletin
Rice institute phamphlets
Rider and driver. Ag.
Rio de janeiro. Biblotheca nacional. Boletin
Rivista d'art
Rockefeller foundation. Bulletin
Rockefeller institute. Monographs
Rockefeller institute for medical research. Studies
Romania
Romanic review
Romanische forschungen
Rosenberg library. Bulletin
Round table
Royal agricultural society. Journal. Ag.
Royal anthropological institute of Gt. Britain. Journal
Royal astronomical society. Monthly notices. Memoirs. O.
Royal Canadian institute. Trans.
Royal horticultural society. Journal
Royal microscopical society. Journal
Royal society of London. Proceedings
Royal society of London. Philosophical trans.
Royal society of Victoria. Proc.
Royal statistical society. Journal
Rural manhood
Rural New Yorker. Ag.
Rural schools bulletin. Ag.
Rural school messenger
Russel Sage foundation. Library bulletin
Russian information bureau in the U. S. Bulletin
Russian liberation committee. Publications

Sabbath recorder
K. Sach. Gesellschaft d. wissen. zu Leipzig. Berichte. Math.-phys. klasse
K. Sach. Gesellschaft d. wissen. phil.-hist. klasse
St. Louis art museum. Exhibit catalogs
St. Louis art museum. Bulletin
St. Louis. Health department. Vital statistics
St. Louis. Health department. Bulletin
St. Louis. Mercantile library. Bulletin
St. Louis. Public library. Bulletin
St. Louis railway club. Proceedings
St. Louis university. Bulletin
St. Louis law review. L.
St. Nicholas
Salvador. Ministero de relation exteriores. Boletin
Scandinavian studies and notes
School and home education
School and community
School arts magazine
School review
School and society
School life
School science and mathematics
Scientific monthly
Schweizerische naturforschende gesellsch. Verhandlungen
Science
Science abstracts
Science and industry
Science progress
Scientia
Scientific agriculture. Ag.
Scientific American
Scientific American monthly
Scottish historical review
Scottish journal of agriculture. Ag.
Scribner's magazine
Seamans journal
Seattle. Wash. Public Library. Library poster
Seed world. Ag.
Seismological society of America. Bulletin
Sendai. Japan. Science reports
Sendai. Japan. Technology reports
Sendai. Japan. Anatom institut. Arbeiten
Sendai. Japan. Path. institut. Mitteilungen
Shepard's citations.—
  Atlantic reporter. L.
  Federal. L.
  Illincis. L.
  Massachussetts. L.
  Missouri. L.
  New Jersey L.
  New York court of appeals. L.
  Northeastern. L.
  Pacific reporter. L.
  Southern reporter. L.
  Southwestern reporter. L.
Shoeworkers journal
Shorthorn in America. Ag.
Shorthorn world. Ag.
Showme
Sibley journal of engineering. E.
Signet of phi beta kappa

Simmons college bulletin
Simplified spelling board. Bulletin
Simple tax review
Sioux City. Spirit of progress
Skandinavisches archiv fur physiologie. M.
Smith college. Bulletin
Smith college. Studies in history
Smithsonian miscellaneous collections
Social agencies. Bulletin
Social hygiene
Social hygiene. Bulletin
Sociedad cientifica. Memorias y revista
Sociedad Iberica de ciencias naturales Boletin
Sociedad nacional de minera. Boletin
Societas scientia. Upsala. Nova acta
Societas pro fauna et flora fennica. Acta
Societas pro fauna et flora fennica. Meddelanden
Société chemique de Paris. Bulletin
Société de chemie biologique. Bulletin
Société de legislation comparé. Bulletin
Société Française d'electricité. Bull. E.
Société geologique de France. Bulletin
Société mathematique de Paris. Bulletin
Societe royal de sciences medicales et naturales. Annales et Bulletin
Society for the advancement of Scandinavian study. See Scandinavian studies and notes
Society for experimental biology and medicine. Proc. M.
Society of chemical industry. Journal
Society of comparative legislation. Journal
Society for the promotion of engineering education. Bull. E.
Sociological review
Soil science. Ag.
South Africa. Botany division. Science bulletin
South Africa. Dept. of agriculture. Journal. Ag.
South Africa. Census director. Quarterly abstracts
South Atlantic quarterly
South Australia. Journal of dept. of agriculture. Ag.
Southern engineer. E.
South Australia. Mines department. Review of mining operations
Southeastern reporter. L.
Southern planter. Ag.
Southern lumberman
Southern reporter (advance sheets). L.
Southwest standard
Southwestern historical quarterly
Southwestern law review. L.
Southwestern political science quarterly
Southwestern reporter (advance sheets) L.
Special libraries
Spectator
Spirit of missions
Spotted Poland China booster. Ag.
Spotted Poland China journal. Ag.
Starry cross
Staten Island association of arts and sciences. Museum bulletin
Stevens indicator
Stone
Stone and Webster's journal
Stone cutters' journal
Stove mounters and range worker's journal
Struggling Russia
Studien zur angl. philol.
Studies in sociology
Successful farming. Ag.
Supplementary educational monographs
Survey. Cop. 2. J.
Surveyor. E.
Svenskt land. Ag.
Sveriges allmänna landbrukssallskaps Medlemsblad. Ag.
Sweden. Central anstalten f. jordbrutksforsok. Flygblad
Sweden. Central anstalten f. forsosvasendet. Meddelande
Sweden. Statens skogs forsoksanstalten. Flygblad
Swine breeders journal. Ag.
Swine world. Ag.
Syracuse university. Bulletin
System. J.
System on the farm. Contin in field illustrated

Tahoku imperial university. See Sendai
Tahoku mathematical journal
Tailor
Tea and coffee trade journal
Teachers college. Contributions to education
Teachers college record
Teaching

Techne
Technik u wirtschaft
Technology review. E.
Telephony. E.
Tennessee. Geological survey. Bulletin
Tennessee. University. Record
Terrestrial magnetism
Texas. Board of health. Child hygiene bureau. Bulletin
Texas. Dept. of education. Bulletin
Texas history teachers bulletin
Texas library and historical commission. Bulletin
Texas mathematics teachers bulletin
Texas review
Texas state journal of medicine
Texas. University. Bulletin
Texas. University. Bulletin. Gen. series
Texas. University. Bulletin. Humanistic ser.
Texas. University. Bulletin. Med. ser.
Texas. University. Bulletin. Municipal research ser.
Texas. University. Bulletin Reprint. ser.
Texas. University. Bulletin. Scientific ser.
Texas University. Studies in English
Texas. University. Studies in history
Textile world journal
Theosophical quarterly
Through the leaves. Ag.
Tidsskrift for planteavl. Ag.
Tijdschrift voor nederlandische 'tallen litt.
Timber trades journal
Timberman
Tokyo. University. Observatory. Annales
Tokyo. University. Mitteilungen. a. d. med. 1akultät
Toronto University. Studies. Biological series
Toronto. University. Studies. Chemical laboratory papers
Toronto. University. Studies. Geological series
Toronto. University. Studies. Philological series
Toronto. University. Studies from the physical laboratories
Torrey botanical club. Bulletin. B.
Torrey botanical club. Memoirs
Torreya
Town planning and conservation of life
Tractor and gas engine review. E. Cop. 2. Ag. E.
Trained nurse. M.
Training school bulletin
Trans-pacific monthly
Transylvania university. Bulletin
Travel
Travelers standard. E.
Trident
Tucuman. Universidad. Boletin
Tucuman. Universidad. Revista
Tufts college. Bulletin
Tufts college. Studies
Typographical journal

Union Signal
Union theological seminary
United association of journeyman plumbers. Official organ
United mine workers journal
United States department of agriculture (all publications)
United States. Census office. Bulletin
United States. Childrens bureau. Publications
United States. Coast and geodetic survey. Pubs.
United States. Commerce reports
United States. Commerce and labor department. Tariff series
United States. Copyright office. Bulletin
United States. Documents. Monthly catalog
United States. Education bureau. All publications
United States. Federal board for vocational ed. Pub.
United States. Fisheries bureau. Document
United States. Foreign and domestic commerce bureau. Pubs.
United States. Geographic board. Decisions
United States. Geological survey. Bulletin
United States. Geological survey. Professional papers
United States. Geological survey. Water supply and irrigation papers
United States. Hygienic laboratory. Bulletin
United States. Internal revenue bureau. Income tax rulings

United States. Interstate commerce commission. Bulletin
United States. Interstate commerce com. Accident bulletin
United States. Interstate commerce com. Accounting bulletin
United States. Labor department. Pubs.
United States. Library of congress. Monthly list of state publications
United States. Library of congress. Copyright entries
United States. Markets bureau. Pubs.
United States. Mines bureau. Pubs.
United States. National herbarium. Contributions. Ag.
United States. National museum. Bulletin
United States. Naval medical bulletin
United States. Ordnance dept. Pubs.
United States. Patent office. Official gazette
United States. Plant industry bureau. Pubs.
United States. Public health service. Reports
United States. Reclamation record
United States. Standards bureau. Bulletin
United States. Standards bureau. Circular
United States. States relations service
United States. Statistics bureau. Monthly summary of commerce and finance
United States statutes citator digest. L.
United States. Steel corporation. Bulletin (opinions)
United States. Supreme court reporter. (advance opinions) L.
United States. Tariff commission. Tariff information series
United States. War industries board. Price bulletin
United States. Weather bureau. Climatalogical data
United States. Weather bureau. National weather and crop bulletin
United States. Weather bureau. Daily river stages
United States. Weather bureau. Monthly weather review
United States. Womens bureau. Bulletin
University of Cincinnati. Medical bulletin
University of Pennsylvania law review. L.
Unpartisan review
Upsala. Univ. Forelasningar och ofningar
Upsala. University. Geolog. inst. Bulletin
Utah. University. Bulletin

Valve world. E.
Verein deut ingenieur. Zeitschrift. E.
Vermont. Board of health. Bulletin
Victoria. Dept. of agri. Journal. Ag.
Vie agricole et rurale. Ag.
Virginia. Forestry leaflet
Virginia. Geological survey. Bulletin
Virginia. Health bulletin
Virginia law review. L.
Virginia. State library. Bulletin
Virginia. University. Record
Virginia medical monthly. M.
Vocational summary
Voce di campie dei mercati. Ag.
Vogue. H. E.

Wallace's Farmer. Ag.
Washington & Jefferson college. Bulletin
Washington farmer. Ag.
Washington. State dept. of health. Bulletin
Washington (state) University. Bulletin
Washington (state) University. Pubs. in botany
Washington (state) University. Pubs. in English
Washington (state) University. Pubs. in geology
Washington (state) University. Pubs. in math. & physical sciences
Washington (state) University. Pubs. in pol. & social sciences
Washington university (St. Louis). Bulletin
Washington university (St. Louis). Medical school. Bulletin
Washington university record
Washington university studies
Weekly newsletter. Ag.
Weekly notes. London. L.
Weekly review
Wellcome chemical research laboratory
Wesleyan university. Bulletin
West coast lumberman
West Virginia. Board of health. Bulletin

West Virginia. University. Bulletin
West Virginia law quarterly. L.
Western Australia. Geolog. survey. Bulletin
Western Australia. Quarterly statistical report
Western coal journal
Western farm life. Ag.
Western farmer. Ag.
Western grain journal. Ag.
Western insurance review
Western Reserve university. Bulletin
Western society of engineers. Journal. E.
Western theological seminary. Bulletin
Western watchman
Westminster college. Bulletin
White pine series of architectural monographs
Wiener beitrage zur englischen philologie
Wiener landwirtschliche zeitung. Ag.
Wiener studien zur klassische philologie
Wilson ornithological club. Bulletin
Wireless age. E.
Wisconsin academy of sciences. Transactions
Wisconsin engineer. E.
Wisconsin. Geological and natural history survey. Bulletin
Wisconsin historical society. Checklist of Wis. pub. documents.
Wisconsin. University. Bulletin. Engineering series. E.
Wisconsin. University. Bulletin. Science series
Wisconsin. University. Studies. Lang. and literature series
Wisconsin. University. Studies. Social science series
Wisconsin law review. L.
Wistar institute of anatomy and biology. Memoirs. M.
Wochentliches verzeichnis
Wochenschrift fur klassische philologie
Woman patriot
Women lawyers journal
Worcester art museum. Bulletin
World agriculture. Ag.
World friendship
World outlook. Merged in Christian Herald
Worlds work. Cop. 2. J.
World tomorrow. J.
Writer. J.
Writers monthly. H.
Wyoming. State geological survey. Bulletin
Wyoming. University. Bulletin

Yale alumni weekly
Yale law journal. L.
Yale review
Yale university. Bulletin

Zeitschrift für allg. deut. sprachvereins
Zeitschrift für allgemeine physiologie. M.
Zeitschrift für analytische chemie
Zeitschrift für angewandte chemie
Zeitschrift für angewandte psychologie
Zeitschrift für anorganische chemie
Zeitschrift für ästhetik u. allgemeine kunst-wiss.
Zeitschrift für biologie. B.
Zeitschrift für biolog. technik u. methodik. B.
Zeitschrift für botanik B.
Zeitschrift für der deutschkunde
Zeitschrift für deut landwirtschaftsrate. Ag.
Zeitschrift für deut. mundarten
Zeitschrift für deutsche philologie
Zeitschrift für deutsches altertum
Zeitschrift für elektrochemie
Zeitschrift für fleisch-und milchhygiene
Zeitschrift für forst u Jagdwesen
Zeitschrift für gesamte getreidewesen. Ag.
Zeitschrift für hygiene. M.
Zeitschrift für immunitatsforschung. M.
Zeitschrift für induktive abstammungs und vererbungslehre.
Zeitschrift für instrumentenkunde
Zeitschrift für kinderforschung
Zeitschrift für klinische medizin. M.
Zeitschrift für krebsforschung. M.
Zeitschrift für math. u natur. unterricht
Zeitschrift für morphologie u anthropologie. M.
Zeitschrift für landwirtschaft Versuchwesen-oesterreichs. Ag.
Zeitschrift für pflanzenkrankheiten. B.
Zeitschrift für math. u. physik.
Zeitschrift für philosophie
Zeitschrift für physikal. chemie
Zeitschrift für physiologische chemie

Zeitschrift für pädagogische psychologie
Zeitschrift für physik
Zeitschrift für praktische geologie
Zeitschrift für psychologie und physiologie der sinnesorgane
Zeitschrift für romanische philologie
Zeitschrift für schulgesundheitspflege
Zeitschrift für untersuchung der nahrungs und genussmittel
Zeitschrift für wissenschaftliche mikroskopie
Zeitschrift für wissenchaftliche zoologie. B.
Zentralblatt für agrikultur-chemie
Zentralblatt für physiologie. M.
Zentralblatt für innere medizin. M.
Zoologica
Zoological record. B.
Zoological society bulletin. B.
Zoologische jahrbucher. Abt. fur anatomie and ontogonie. B.
Zoolog. jahresbericht. B.
Zoologische institut zu Graz. Arbeiten
Zoolog. station zu Neapel. Mitteilungen. B.
Zoologischer anzeiger. B.
Zurich. Sternwarte. Pub.

PART II

List of periodicals currently received in the Agricultural, the Engineering, the Journalism, the Law and in the Medical library.

AGRICULTURE LIBRARY

Aberdeen-Angus journal
Agricultural engineering
Agricoltur Ferrarese
Agricultural gazette of Canada
Agricultural gazette of New South Wales
Agricultural index
Agricultural journal of India
Agricultural review
Agricultural journal of Japan(in Japanese lang.)
Agrimotor
Alba agricola
American assn. of cereal chemists. Journal
American breeder
American city
American cooperative journal
American co-operative manager
American farming
American fertilizer
American florist
American fruit grower
American Hereford journal
American miller
American pigeon journal
American poultry advocate
American society of agromony. Journal
American sheep breeder
American swine herd
American veterinary medical association. Journal
Annales de la science agronomique
Ayrshire quarterly

Berkshire world
Better business
Better farming
Better fruit
Biedermann's zentralblatt fur agrikulturchemie
Boys' and girls' farm club leader
Breeders gazette
Butcher's advocate

California cultivator
Canadian horticulturist
Cavalry journal
Chester White journal
Chester White post
Chicago dairy produce
Clay Robinson & Co., live stock report
Coltivatore
Commercial fertilizer
Concrete
Concrete age
Cotton oil press
Country gentleman
Country life (London)
County agent
Creamery and milk plant monthly
Creamery journal

Dairy (London)
Dairy farmer
Dairy record
Dakota farmer
Defensa agricola. Uruguay
Deutsch-Amerikanischer farmer
Deutsche landwirtschaftliche presse
Deutsche landwirtschaftliche gesellschaft. Mitteilungen
Dog fancier
Domestic bee keeper
Duroc bulletin
Duroc digest

Experiment station record
Elgin dairy report
Evaporator

Farm & fireside
Farm & home
Farm & implement news
Farm implements & tractors
Farm journal
Farm mechanics

Farm life
Farm stock & home
Farmer & stockman
Field (illustrated)
Florida entomologist
Florists' exchange
Flour & feed
Fruit trade journal
Fuhling's landwirtschaftliche zeitung

Garden magazine
Gardener's chronicle
Gardening
Gartenflora
Gazette agraria commerciale industriale
Giornale di agricoltura della domenica
Giornale d'Italia agricola
Gleanings in bee culture
Grain dealers' journal
Great Britain. Board of agriculture. Journal
Guernsey breeders' journal

Hampshire advocate
Hoard's dairyman
Holstein Friesian world
Homestead
Horse review
Horse shoer's journal
Hospodar
House beautiful

Illustrated review
Implement and machinery review
Indiana farmers guide
Inland farmer
Inland poultry journal
International institute of agriculture—
Bulletin of agricultural statistics; also documentary leaflets
Bulletins of bureau of agricultural intelligence and plant diseases
Bulletin of bureau of economic and social intelligence
Internationale mitteilungen fur bodenkunde
Ireland. Dept. of agriculture. Journal
Italia agricola

James barn magazine
Jersey bulletin and dairy world
Journal d'agriculture pratique
Journal für landwirtschaft
Journal of agricultural research
Journal of agricultural science
Journal of agriculture and horticulture
Journal of dairy science
Journal of farm economics
Journal of heredity

Kansas farmer

A Lavoura
Landwirtsch versuchstationen
Landtmannen; tidskrift for landtman
Leghorn world
Live stock journal
Louisiana planter

Mark Lane express
Market reporter
Michigan farmer
Milk dealer
Milking shorthorn journal
Missouri farmer
Missouri ruralist
Modern miller
Monthly crop review

National farmer & stock grower
National grange monthly
National nurseryman
National Poland China journal
National provisioner
National stockman & farmer
National wool grower
Nebraska farmer
New York produce review
New Zealand. Department of agriculture. Journal
Norsk landmandsblad
Northwest dairyman and farmer
Northwest dairyman & horticulturist

Oekonom zeitung fur landwirtschaft
Ohio farmer
O'hara instituts fur landwirtshaftliche forschungen. Berichte
Oklahoma farmer
Operative miller
Orange Judd farmer
Ozark countryman

Pacific dairy review
Park and cemetery
Paysan Suisse
Pennsylvania farmer
Phillippine agricultural review
Phillippine agriculturist
Poland China journal
Potato magazine
Prairie farmer
Price current grain reporter
Progres agricole et viticole
Progressive farmer

Queensland agricultural journal

Rabbitcraft
Reclamation journal
Red polled journal
Refrigeration
Reliable poultry journal
Revista di agricoltura. Parma
Revista agricultura du Puerto Rico
Revista agricola. Mexico
Revista industrial y agricola de Tucuman
Revista de agricultura. Dominican republic
Revista de agricultura. Santiago
Revue horticole
Rider & driver
Rural New Yorker

Scientific agriculture
Scottish journal of agriculture
Seed world
Shorthorn in America
Shorthorn world
Soil science
South Africa. Dept. of agri. Journal
South Australia. Dept. of agri. Journal
Southwestern stockman farmer
Spotted Poland China booster
Spotted Poland China journal
Svenskt land
Successful farming
Sveriges Allmänna landtbrukssallskaps Medlemsblad
Successful farming
Swine breeders' journal
Swine world
System on the farm, contin. in field illustrated

Through the leaves
Tiddskrift for planteavl

Victoria. Dept. of agriculture. Journal
Vie agricole et rurale
Vogue
Voco de campie dei Mercati

Wallace's farmer
Washington farmer
Weekly news letter
Western farm life
Western farmer
Western grain journal
Wiener landwirtschaftliche zeitung
World agriculture

Zeitschrift fur gesamte getreidwesen
Zeitschrift des landwirtschaftsrats
Zeitschrift fur landwirtsch. versuchswesen oesterreich

ENGINEERING LIBRARY

Aerial age
American builder
American electro chemical society. Transaction
American gas engineer journal
American institute of electrical engineers. Proceedings
American machinist
American society civil engineers. Transactions
American society of heating & ventilating engineers. Journal
American society of mechanical engineers. Journal contin. as mechanical engineering
American society mechanical engineers. Transactions
American society of refrigerating engineers. Journal
American society for testing materials. Proceedings
American waterworks association. Journal
Anales de ingenieria. Bogota, Columbia
Atlantic monthly
Automobile dealer & repairer

Automotive industries
Auto review
Aviation

Building age

California. University. Publications in engineering
Canadian railway club. Proceedings
Canadian society of civil engineers. Trans.
Cement and engineering news
Century
Chemical & metalurgical engineering
Colorado. University. Journal of engineering
Concrete highway engineering
Cornell civil engineer

Electric journal
Electric railway journal
Electrical review (Western electrician)
Electric traction
Electrical world
Electrician
L'electricien
Elektrotechnik und maschinenbau
Elektrotechnische zeitschrift
Engineer (London)
Engineering (London)
Engineering and contracting
Engineering news record
Engineers' club of Philadelphia. Journal
Engineers' club of St. Louis. Journal

Flying
Forbes business magazine

General electric review
Genie civil
Gesundheits. ingenieur
Graphite

Harpers magazine
Heating and ventilating magazine

Ice & refrigeration
Illuminating engineer
Illuminating engineering society. Transactions
Industrial arts index
Industrial management
L'Industrie electrique
La Ingenieria (Buenos Aires)
Institute of radio engineers. Proceedings
Institution of civil engineers. Minutes and proceedings
Institution of electrical engineers. Journal
Institution of mechanical engineers. Proceedings
International ass'n of refrigeration. Bulletin
Iowa engineering society. Proceedings
Iowa state college of agriculture. Bulletin
Iron age

Journal fur gasbeleuchtung und wasserversorgung

Kansas. University. Bulletin

Literary digest

Machinery
Mechanical engineering
Miami conservancy bulletin
Michigan technic
Military engineers
Mining and metallurgy
Mitteilungen aus dem materialprufungsamt zu Berlin-Dahlem
Missouri. University. Bulletin. Engineering series
Motor age
Motor life
Motor world
Municipal and county engineering

National electric light ass'n. Monthly bulletin
National electric light ass'n. Proceedings
New England water-works association. Journal

Outlook

Patton's monthly
Popular mechanics
Power
Power plant engineering
Professional engineer
Public roads
Public works

Railway age
Railway mechanical engineer
Railway signal association. Journal
Refrigeration
Revue generale de l'electricité

Science abstracts. Sec. B. Electrical engineering
Scientific American
Sibley journal of engineering
Society for promotion of engineering education. Bulletin
Société Française des electriciens. Bulletin
Southern engineer
Stone and Webster journal
Successful methods
Surveyer

Technology review
Telephony
Tractor and gas engine review

Travelers standard

University of Colorado. Journal of engineering

Valve world

Western society of engineers. Journal
Wireless age
Wisconsin engineer
Wisconsin. University. Bulletin. Engineering serie
Worlds work

Zeitschrift des vereines deutscher ingenieure

JOURNALISM LIBRARY

Advertising & selling
Advertiser's weekly
Advertising world
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American news trade journal
American printer
Asia
Atlantic monthly

British printer
Building farm trade
Business

Cartoons
Christian herald
Colliers weekly
Commercial index
Country gentleman
Country life. London

Drygoodsman

Editor
Editor & publisher

Farm life
Fourth estate
Freeman

Graphic. London

Independent
Inland printer
International conciliation

John O'London's weekly
Judicious advertising

Literary digest

Nation (N. Y.)
Nation (London)
National geographic magazine
National printer journalist
New republic
Newspaperdom
New York times index

Official railway guide

Printers ink. Weekly
Printers ink. Monthly
Public opinion
Printing art suggestion book
Printing art

Survey
System

World tomorrow
World's work
Writer
Writers monthly

LAW LIBRARY

American digest (advance sheets)
American bar association. Journal
American journal of international law
American judicature society. Journal
American law review
American law school review
Atlantic reporter (advance sheets)

British & colonial prize cases

California law review
Case & comment
Central law journal
Citator. Missouri edition
Columbia law review
Cooperator
Cornell law quarterly

Docket
Dominion law reports

Federal reporter (advance sheets)
Federal statutes annotated. Supplement

Harvard law review

Illinois law review
Illinois law bulletin
Index to legal periodicals
Iowa law bulletin

Journal of comparative legislation & international law

Law notes
Law review. University of Detroit
Law quarterly review
Law reports—
- Appeal cases (advance sheets)
- Chancery division (advance sheets)
- Current digest
- King's bench & probate division (advance sheets)
- Statutes

Maine law review
Michigan law review
Minnesota law review
Marquette law review
Misouri public service commission. Reports

New York supplement (advance sheets)
Northeastern reporter (advance sheets)
Northwestern reporter (advance sheets)

Pacific reporter (advance sheets)
Public utilities reports

St. Louis law review
Shepard's citation. Federal
Shepard's citation. Missouri
Shepard's citations—
- Atlantic reporter
- Illinois
- Massachussetts
- New Jersey
- N. Y. court of appeals
- Northeastern reporter
- Pacific reporter
- Pennsylvania supreme court
- Southern reporter
- Southwestern reporter

Southwestern law review

United States supreme court reporter (advance sheets)
United States supreme court. Advance opinions
University ofPennsylvania law review
United States statutes citer-digest

Virginia law review

West Virginia law quarterly
Weekly notes. London
Wisconsin law review

Yale law review

MEDICAL LIBRARY

Abstracts of bacteriology
Acta medica Scandinavica
American anatomical memoirs
American journal of anatomy
American journal of hygiene
American journal of nursing

American journal of medical sciences
American journal of pharmacy
American journal of physiology
American journal of public health
American journal of tropical medicine
American medical association. Journal

Annales de medicine
Anatomical record. M.
Anatomische hefte
Anatomischer anzeiger
Annals of surgery
Archiv für anat. u. entwickelungsge-Shichte. Anat. abt.
Archiv für anat. u. entwickelungsgeschichte. Physiol. abt.
Archiv für anatomie u. physiologie
Archiv für die gesammte physiologie
Archiv für exper. path. u pharmakologie
Archiv für gynaekologie. M.
Archiv für hygiene
Archiv für klinische chirurgie
Archiv für mikroskopische anatomie
Archiv für path. anatomie (Virchow)
Archiv für physiologie
Archives d'anat. microscopique
Archives de med. exper. and path.
Archives int. de pharmacodynamie
Archives internationales de physiologie
Archives italiennes de biologie
Archives of internal medicine
Archives of ophthalmology
Archivio di farmacologia sperimentale
Archivio di fisiologia
Archivio italien di anat. & embryol

Beitrage zur path. anat.
Berliner klinische wochenschrift
Bibliographie anatomique
Bio-chemical journal
Boston medical and surgical journal
Brain
British journal of surgery
British medical journal

Centralblatt fur allgemeine pathologie
Centralblatt fur bakteriologie. Abth 1 originale
Centralblatt fur bakteriologie. Abth. 1 referate
Centralblatt fur die medicinischen wissenschaften
Centralblatt fuer innere med.
Centralblatt fuer normal. anat.
Centralblatt fur physiologie

Deut. archiv f. klinische med.
Deutsche medizinische wochenschrift
Deut. zeitschrift fuer chirurgie

Endocrinology

Folio neurobiologica

Heart

Index medicus
Institut Pasteur. Annales
Institut Pasteur. Bulletin
International journal of gastro-enterology
International journal of public health
Internationale monatsschrift. f. anat. and physiol.
Internationales archiv fur schulhygiene

Jahresbericht uber die fortschritte der anatomie u. entwick
Johns Hopkins hospital. Bulletin
Journal de l'anat. et physiol.
Journal de physiologie et de path. generale
Journal of anatomy and physiology
Journal of bacteriology
Journal of biological chemistry
Journal of cancer research
Journal of comparative neurology
Journal of experimental medicine
Journal of infectious diseases
Journal of general physiology
Journal of hygiene
Journal of industrial hygiene
Journal of immunology
Journal of laboratory and clinical medicine
Journal of medical research
Journal of nervous and mental diseases
Journal of parasitology
Journal of pharmacology and exp. therapeutics
Journal of physiology
Journal of state medicine

Lancet

Modern hospital
Munchener medicinische wochenschrift

New York medical journal

Office international de hygiene publique. Bulletin

Parasitology
Physiological abstracts
Physiological review

Quarterly cumulative index to current medical literature

Quarterly journal of experimental physiology

Revista sud-Americana d'indocrinologie

Skandinavisches archiv fur physiologie
Society for experimental biology. Proceedings

Tohoku journal of experimental medicine
Trained nurse and hospital review

Zeitschrift fur allgemeine physiologie
Zeitschrift fur hygiene
Zeitschrift fur immunitatsforschung
Zeitschrift fur klinische medizin
Zeitschrift fur krebsforschung
Zeitschrift fur morphologie

THE UNIVERSITY OF MISSOURI BULLETIN

VOLUME 27, NUMBER 16

LIBRARY SERIES

No. 12

CHECK LIST OF THE OFFICIAL SERIAL PUBLICATIONS OF THE UNIVERSITY

Edition 3

ISSUED FOUR TIMES MONTHLY; ENTERED AS SECOND-CLASS MATTER AT THE POSTOFFICE AT COLUMBIA, MISSOURI—1000

APRIL 21, 1926

PREFACE

The purpose of the third edition of this check list is to make available the valuable material being published by the University and to record in permanent form the serial publications of the University up to and including 1925.

A new feature of the second check list was the general index of subjects and authors appearing in the publication. This has been retained in the third edition. The publications have now become so numerous, that an index will prove very helpful in locating bulletins, circulars, studies, and the like.

The general series of the bulletins have not been indexed. This series is devoted to announcements of the courses in the several colleges and schools and contains nothing of a scientific or learned nature. The catalogs of the University have been published as bulletins since 1900.

Unless otherwise stated, copies of the various publications in print may be secured by addressing the librarian of the University.

HENRY ORMAL SEVERANCE.

CONTENTS

Page

Preface 3

University of Missouri Studies 5-7
- Literature and Linguistic series 5
- Mathematical series 6
- Philosophy and education series 6
- Science series 6
- Social science series 6

The University of Missouri Bulletin 7
- General series 7-10
- Astronomical series 10
- Education series 11
- Engineering series 13
- Extension series 14
- Journalism series 16
- Law series 17
- Library series 19
- Literature series 20
- Medical series 20
- Rural education series 21
- Science series 21
- Social science series 22

College of agriculture & agricultural experiment station publications
- Farm bulletin 23
- Boys and girls club circulars 42
- Bulletins 24
- Circulars 31
- Project announcements 42
- Research bulletins 34
- Extension circulars 37
- Extension service leaflets 41

School of mines publications 43

Index 48

THE UNIVERSITY OF MISSOURI STUDIES

The Studies are devoted to the publication of extensive papers embodying the results of original research made by members of the faculty and by graduate students. No paper that has appeared elsewhere will be accepted for publication in the Studies.

After the publication of two volumes of miscellaneous papers, the Studies were differentiated into series, of which the following are now being issued: 1, social science series; 2, science series; 3, literary and linguistic series; 4, philosophy and education series; 5, mathematics series. Continued, January 1, 1926 as the University of Missouri Studies: A Quarterly of Research.

Frank Thilly editor 1901-1904
William G. Brown editor 1905-1912
George Lefevre editor 1913-1923

VOLUME 1—*Out of Print*

1. Contributions to a psychological theory of music, by Max Meyer, Ph. D., professor of experimental psychology. vi, 80 p. 1901. 75 cents.
2. Origin of Covenant Vivien, by Raymond Weeks, Ph. D., professor of romance languages. viii, 64 p. 1902. 75 cents.
3. The evolution of the northern part of the lowlands of southeast Missouri, by C. F. Marbut, A. M., professor of geology. viii, 63 p. 1902. $1.25.
4. Eileithyia, by Paul V. C. Baur, Ph. D., acting professor of classical archaeology. vi, 90 p. 1902 $1.00.
5. The right of sanctuary in England, by Norman Maclaren Trenholme, Ph. D., professor of history. viii, 106 p. 1903. 75 cents.

VOLUME 2—*Out of Print*

1. Ithica or Leucas? by William Gwathmey Manly, A.M., Professor of Greek language and literature. vi, 52 p. 1903. $1.00.
2. Public relief and private charity in England, by Charles A. Ellwood, Ph. D., professor of sociology. viii, 96 p. 1903. 75 cents.
3. The process of inductive inference, by Frank Thilly, Ph. D., professor of philosophy. v, 40 p. 1904. 35 cents.
4. Regeneration of crayfish appendages, by Mary I. Steele, M. A. viii, 47 p. 1904. 75 cents.
5. The spermatogenesis of anax junius, by Caroline McGill. viii, 15 p. 1904. 75 cents.

LITERARY AND LINGUISTIC SERIES

VOLUME 1

Chevalerie Vivien, facsimile phototypes, with an introduction and notes, by Raymond Weeks, Ph. D., formerly professor of romance languages. 12 p. plates 24. 1909. $1.25.

VOLUME 2

The cyclic relations of the Chanson de Willame, by Theodore Ely Hamilton, A. M., Ph. D. ix, 301 p. 1911. $1.25.

MATHEMATICAL SERIES

VOLUME 1

1. On the definition of the sum of a divergent series by Louis Lazarus Silverman, Ph. D. v, 96 p. 1913. $1.00.

PHILOSOPHY AND EDUCATION SERIES

VOLUME 1

1. The treatment of personality by Locke, Berkeley and Hume, by Jay William Hudson, Ph. D., assistant professor of philosophy. xvi, 96 p. 1911. 75 cents.

SCIENCE SERIES

VOLUME 1

1. Topography of the thorax and abdomen, by Peter Potter, M. A., M.D. vii, 142 p. 1905. $1.75. Out of print.
2. The flora of Columbia and vicinity, by Francis Potter Daniels, Ph. D. x, 319 p. 1907. $1.25.

VOLUME 2

1. An introduction to the mechanics of the inner ear, by Max Meyer, Ph. D., professor of experimental psychology, viii, 140 p. 1907. $1.00. Out of print.
2. The flora of Boulder, Colorado, and vicinity, by Francis Potter Daniels, Ph. D. viii, 453 p. 1911. $1.50.

VOLUME 3

1. Barite deposits of Missouri and geology of the barite district, by William Arthur Tarr, associate professor of geology, University of Missouri. xii, 111 p. 10 pl. 1918. $1.25.

SOCIAL SCIENCE SERIES

VOLUME 1

The clothing industry in New York, by Jesse E. Pope, Ph. D., professor of economics and finance. xviii, 340 p. 1905. $1.25.

VOLUME 2

1. The social function of religious belief by William Wilson Elwang, Ph. D. viii, 100 p. 1908. $1.00.
2. The origin and early development of the English universities to the close of the thirteenth century, by Earnest Vancourt Vaughn, A.M., instructor in history. viii, 147 p. 1908. $1.00.
3. The origin of the werewolf superstitution, by Caroline Taylor Stewart, A. M., Ph. D., assistant professor of germanic languages. iv, 32 p. 1909. 50 cents.
4. The transitional period, 1788-1789, in the government of the United States, by Frank Fletcher Stephens, Ph. M., Ph. D., instructor in American history. viii, 126 p. 1909. $1.00.

VOLUME 3

1. Assyrian historiography: a source study, by Albert Ten Eyck Olmstead, Ph. D., associate professor of ancient history. pp. viii, 65. 1916. $1.00.
2. Anton's oriental policy until the defeat of the parthian expedition, by Lucile Craven, Ph. D. pp. xii, 88, 1920. $1.00.
3. Children born out of wedlock. A sociological study of illegitimacy, with particular reference to the United States, by George B. Mangold, Ph. D. pp. X, 209, 1921. $1.50.

THE UNIVERSITY OF MISSOURI STUDIES

A Quarterly of Research

Subscription: $4.00 per year; $1.25 per copy

Editor in charge: Robert J. Kerner. Board of Editors: Edgar Allen, Harry M. Belden, Jesse H. Coursault, Merritt F. Miller, James L. Parks, Henry O. Severance, Walter Williams.

1. The Isoelectric Point for Plant Tissue and its Importance in Absorption and Toxicity, by William J. Robbins, Ph.D., Professor of Botany.
   Parasitic and Wood-Destroying Fungi of Boone County, Missouri, by Willis E. Maneval, Ph.D., Assistant Professor of Botany.
2. The origin of Chert and Flint, by Professor William Arthur Tarr, Ph.D., Professor of Geology.
3. The Geography of the St. Francis Basin, by Samuel T. Bratton, B.S. in Ed., A.M., Associate Professor of Geology and Geography.
4. The Transformation of the Euler Condition in the Caluclus of Variations, by Lee H. McFarlan, Ph.D., Fellow, National Research Council.
   An Extension of the Theory of Envelopes, by Finis Omer Duncan, Ph.D., Instructor in Mathematics.

UNIVERSITY OF MISSOURI BULLETIN

From 1892 to 1900 there were various bulletins, circulars and announcements published and distributed, but they were not numbered consecutively nor published regularly. One number of the bulletin is known to have been published August 25, 1893, and three to have been published in 1894, but such ephemeral material was not preserved. There undoubtedly were other bulletins. Beginning with volume 1 number 1, February, 1900, the bulletins have a consecutive number.

Bulletin, volumes 1 to 3, number 4, had the title, Bulletin of the University of the State of Missouri. In 1911 a new series of the bulletins was issued. The series which began with volume 1, 1900, was given the title, General series, 1911-1913, with a continuation of the volume number which the bulletin had before the new series was begun. Bulletins issued previous to 1910 are mostly out of print. Practically a lissued since then are available for distribution.

GENERAL SERIES

Published monthly

Edited by John F. Williams, University Publisher

The object of this series is to furnish information regarding the University

and its several colleges and schools. It accordingly consists of the general catalog and the individual announcements of the several divisions of the University. Volume 1, was issued in 1900.

VOLUME 22, 1921

1. January. Special Announcement Spring-Summer Term 1921 2 p.
2. January. Special Courses for Teachers. 10 p.
3. February. Spring-Summer Term Announcement, 1921. 48 p.
4. February. Fifth Summer Library School 1921 June 22-August 3. 3 p.
5. March. School of Journalism Announcement 1921-22. 14 p.
6. March. Schedule of Courses Spring-Summer Term, 1921. 12 p.
7. April. School of Engineering Announcement 1921-22 32 p.
8. April. Department of Nursing Special Announcement. 3 p.
9. April. Catalog. Seventy-ninth Report of the Curators to the Governor of the State, 1920-21. 338 pp.
10. May. Department of Nursing Announcement 1921-22 7 pp.
11. May. College of Agriculture Announcement 1921-22 55 pp.
12. June. Two Year Winter Course in Agriculture Announcement 1921-22 51 p.
13. June. School of Law Announcement 1921-22. 23 p.
14. August. Training for Rural School Service in the School of Business and Public Administration. 7 p.
15. August. School of Medicine Announcement 1921-22. 20 p.
16. August. Schedule of Courses Fall Term, 1921 19 p.
17. November. Graduate School Announcement 1922-23 70 p.
18. December. Schedule of Courses Winter Term, 1922 20 p.

VOLUME 23, 1922

1. January. Department of Nursing Special Announcement 3 p.
2. January. Department of Nursing Announcement 1922-23 8 p.
3. January. Summer Term Announcement 1922 40 p.
4. February. Schedule of Courses, Spring Term 10 p.
5. February. School of Journalism Announcement 1922-23 17 p.
6. March. School of Law Announcement 1922-23. 26 p.
7. March. School of Engineering Announcement 1922-23 34 p.
8. March. College of Agriculture Announcement 1922-23 54 p.
9. April. School of Medicine Announcement 1922-23 17 p.
10. April. School of Business and Public Administration Anouncements 1922-23. 23 p.
11. May. Short Winter Courses in Agriculture Announcement 1922-23. 48 p.
12. May. Catalog Eightieth Report of the Curators to the Governor of the State, 1921-22 354 p.
13. August. Schedule of Courses Fall Term 1922. 19 p.
14. November. Graduate School Announcement 1923-24. 71 p.
15. December. Schedule of Courses Winter Term, 1923 19 p.
16. December. Schedule of Courses Spring Term, 1923. 7 p.

VOLUME 24, 1923

1. January. Catalog Eighty-first Report of the Curators to the Governr of the State 1922-23. 360 p.

2. January. Summer Term Announcement 1923 44 p.
3. February. Department of Nursing Announcement 1923-24 8 p.
4. February. Special Announcement Summer Term 1923 Coaching Courses in Athletics 3 p.
5. March. Special Announcement 1923-24 School of Journalism 6 p.
6. April. Special Announcement 1923-24 School of Law 8 p.
7. March. The Tale of the Tiger 24 p.
8. April. Special Announcement 1923-24 School of Engineering 8 p.
9. May. College of Agriculture Special Announcement 1923-24 30 p.
10. May. College of Arts and Science Honor-Rank List for 1922-1923 10 p.
11. June. Short Winter Courses in Agriculture Special Announcement 1923-24 40 p.
12. June. News of the College of Agriculture University of Missouri 35 p.
13. August. Schedule of Courses First Semester, 1923. 19 p.
14. September. Special Announcement, 1923-24 School of Medicine 9 p.
15. October. Graduate School Announcement 1924-25 58 p.
16. November. Schedule of Courses Second Semester, 1923-24 24 p.

VOLUME 25, 1924

1. January Catalog Eighty-second Report of the Curators to the Governor of the State, 1923-24. 248 p.
2. January. Summer Session Announcement 1924 35 p.
3. February. Summer Session at Rolla Announcement 1924 11 p.
4. February. School of Journalism Announcement 1924-25 23 p.
5. February. College of Agriculture Announcement 1924-25 23 p.
6. March. Department of Nursing Announcement 1924-25 8 p.
7. March. College of Arts and Science Announcement 1924-25 16 p.
8. March. School of Engineering Announcement 1924-25 23 p.
9. April. School of Law Announcement 1924-25. 19 p.
10. April. School of Business and Public Administration Announcement 1924-25. 19 p.
11. May. School of Medicine Announcement 1924-25. 11 p.
12. May. College of Agriculture Short Winter Courses Announcement 1924-25. 32 p.
13. May. The School of Fine Arts Announcement 1924-25. 23 p.
14. September. Schedule of Courses First Semester, 1924-25. 20 p.
15. October. College of Arts and Science Honor-Rank List for 1923-24 8 p.
16. October. School of Education Announcement 1924-25 24 p.
17. November. Graduate School Announcement 1925-26. 60 p.
18. December. Schedule of Courses Second Semester 1924-25 20 p.

VOLUME 26, 1925

1. January. Catalog Eighty-third Report of the Curators to Governor of the State, 1924-1925. 302 p.
   Supplement to the Catalog 78 p.
2. January. Summer Session Announcement 1925 45 p.
3. January. Summer Session at Rolla Announcement, 1925 15 p.
4. February. Department of Nursing Announcement 1925-26 11 p.
5. February. Missouri Interscholastic Meet Columbia April 30, May 1 and 2, 1925 22 p.

6. April School of Journalism Announcement 1925-26 23 p.
7. April. College of Engineering Announcement 1925-26 19 p.
8. May. School of Fine Arts Announcement 1925-26 23 p.
9. May. School of Law Announcement 1925-26 20 p.
10. May. Honor Rank List 1924-25
11. June. Medicine Announcement 1925-26
12. June. College of Arts and Science Announcement 1925-26 8 p.
13. June. College of Agriculture Short Winter Courses Announcement 1925-26 23 p.
14. July. College of Agriculture Announcement 1925-26 24 p.
15. July. School of Education Announcement 1925-26 18 p.
16. July. Department of Home Economics College of Agriculture 7 p.
17. August. Schedule of Courses First Semester 1925-26 20 p.
18. November. Graduate School Announcement 1926-27 74 p.
19. December. Graduate Work in Education University of Mo. New Regulations Announcement of Courses 11 p.

ASTRONOMICAL SERIES

UNIVERSITY OF MISSOURI OBSERVATORY BULLETIN

(Formerly Laws Observatory Bulletin)

Published irregularly.

Edited by Eli Stuart Haynes

This bulletin is devoted exclusively to the publications of astronomical researches conducted in the University of Missouri observatory. Numbers one to sixteen were edited by Frederick Hanley Sears under the title, Law Observatory Bulletin, 1902-1908. It was then placed in the astronomical series of the University bulletin.

Copies may be obtained from the University Publisher, except numbers 1-4, 6, which are out of print.

VOLUME 1

1. Observations and elements of comet b 1902 (Perrine).
2. Observations of comets.
3. Observation of comet a 1904 (Brooks).
4. Observations of a comet e 1904 (Borrelly).
   Photometric observations of Nova Germinorum ch. 2387.
   Special time signals from U. S. naval observatory.
5. The polaris vertical circle method of determining time and azimuth introduction.
6. The agol variable 188. 1904 Draconis.
7. Photometric investigations.
   The disc photometer.
   The wedge photometer.
   Investigation of the wedges.
8. A grant from the Gould fund.
   General remarks concerning variable star observations.
   A new variable, 88. 1906 Lacertae.
   Preliminary results for V Lacertae, 110. 1904.

The variable V vulpeculae, 4. 1904.
Preliminary note on variable 108. 1905 Capricorni.

9. The Algol variable RR Draconis (188.1904).
Preliminary announcement concerning the Algol variable 121.-1906 Draconis.
10. Announcement of preliminary results for variable stars.
(1) General remarks and star lists.
(2) Preliminary results.
11. The variable RS Cassiopeiae (108.1904).
12. Finding ephemerides for comet 1894 IV (E. Swift).
13. The Zollner-Muller photometer.
The Gans-Crawford telescope.
The variable X Lacertae (88.1906).
The variable V Lacertae (110.1904).
14. The variable RV Tauri (45.1905).
15. The Algol variable RW Monocerotis (24.1907).
Preliminary announcements concerning variable stars.
16. The long-period Algol variable RZ Ophiuchi (193.1905).
Preliminary announcement concerning SW Andromedae (5.1907).

VOLUME 2

17. The antalogol variable St. Ophiuchi (52.1907).
18. The agol variable Rx Draconis (121.1906).
19. The Agol variable Rz Draconis (26.1907).
20. Studies with the polarizing photometer.
21. The rotating ellipsoid Ru Camelopardalis.
22. The visual and photographic light variations of RR Lyrae by C. C. Kiess.
23. The visual and photographic light variations of Rt Aurigae by C. C. Kiess.
24. Investigations in extra focal photometry by R. H. Baker and Edith E. Cummings.
25. The eclipsing binary Rx Herculis, by Robert H. Baker, and Edith E. Cummings.
26. The eclipsing binary Z Vulpeculae, by Robert H. Baker.
27. The eclipsing binary TV Cassiopeiae, by Edith E. Cummings.
28. The eclipsing binary u Herculis, by Robert H. Baker.
29. The Eclipsing Binary U Coronae by Robert H. Baker.
30. The Eclipsing Binary U. Cephei by Robert H. Baker.
31. The Eclipsing Binary TX Herculis by Robert H. Baker.
32. The Eclipsing Binary RS Vulpeculae by Robert H. Baker.
33. The Eclipsing Binary TW Draconis by Robert H. Baker.

EDUCATION SERIES

Published irregularly

Edited by Jesse H. Coursault

The object of the education series is the publication of new formulations of educational principles and data of direct value to the schools of the state and of educational researches which have significance for other schools of education.

Copies of these bulletins may be obtained from the university publisher.

1. June, 1911. Circular of information to accredited schools. Fifth edition revised. 123 p. Out of print.
2. November, 1911. Rural school consolidation in Missouri, by O. L. Kunkel and W. W. Charters. 36 p. Out of print.
3. February, 1912. Journalism for teachers, by Frank L. Martin. 27 p.
4. December, 1912. Geography of Missouri, by Frederick Emerson. 74 p.
5. The teaching of poetry in the high school, by A. H. R. Fairchild. 104 p. 1914. Out of print.
6. January, 1913. An experimental study of methods of teaching high school German, by Mamie M. Clarahan. 32 p.
7. Circular of information to accredited schools, sixth edition, revised. Issued by the committee on accredited schools, University of Missouri. 138 p. 1913. Out of print.
8. The kind of scholarship records to be kept in schools, by Max R. Meyer, professor of experimental psychology. 14 p. 1914. Out of print.
9. A course in grammar based on the mistakes made by school children in Kansas City, Missouri, by W. W. Charters, Dean of the faculty of education, and professor of theory of teaching, University of Missouri, and Edith Miller, teacher of English, Soldan high school, St. Louis, Mo. 41 p. 1915. Out of print.
10. Circular of information to accredited schools, seventh edition, revised. Issued by the committee on accredited schools, University of Missouri. 132 p. 1915.
11. Study of the rural schools of Saline County, Missouri, by Joseph D. Elliff, professor of high school administration, and Abner Jones, fellow in education, University of Missouri. 32 p. 1915.
12. Circular of information to accredited junior colleges, issued by the committee on accredited schools and colleges. Edited by J. H. Coursault, professor of history and philosophy of education. 182 p. 1918. Out of print.
13. A standard library organization suggested for Missouri high schools, by Henry Ormal Severance, librarian, University of Missouri. 19 p. 1919. Out of print.
14. Related Science for Use in Vocational Home Economics Classes of Missouri High Schools by Mary L. Klingner, Assistant Professor of Home Economics and Lillian Sensintaffer, Instructor in Home Economics, University of Missouri. 34 p. 1924.
15. A School Building Program for Columbia, Missouri, by M. G. Neale, Dean of the Faculty of the School of Education, Univ. of Mo. 70 p. 1925.
16. A School Building Program for Joplin, Missouri, by M. G. Neale, Dean of the Faculty of the School of Education, U. of Mo. 71 p. 1925.
17. Related Art for Home Economics Classes by Lila M. Welch, Assistant Professor of Home Economics 59 p. 1925.
18. Visual Education for Teachers of Agriculture by Sherman Dickinson Associate Professor of Agricultural Education University of Missouri, 63 p. 1925.
19. Classification of Pupils in a Junior High School by Walter J. Saupe, Assistant Professor of Education, School of Education, University of Missouri 31 p. 1925.

ENGINEERING EXPERIMENT STATION SERIES

Published irregularly

Edited by E. J. McCaustland

"This series is the official publication of the engineering experiment station of the University, which was established by the board of curators on July 1, 1909, for the investigation of such problems in engineering as appear to be of the most direct and immediate value to the people of the state and for researches of importance to manufacturing and industrial interests and to engineers."

Some experiments in the storage of coal by E. A. Fessenden and J. R. Wharton. (Published in 1908, previous to the establishment of the experiment station.)

Copies of these bulletins may be obtained from the university publisher.

VOLUME 1, 1910

1. March. Acetylene for lighting country homes by J. D. Bowles. 34 p.
2. June. Water supply for country homes by K. A. McVey 35-54 p.
3. September. Sanitation and sewage disposal for country homes by W. C. Davidson. 55-72 p.
4. Not published.

VOLUME 2, 1911

1. March. Heating value and proximate analysis of Missouri coals by C. W. Marx and Paul Schweitzer. (Reprint of report published previous to establishment of experiment station). 16 p.
2. June. Friction and lubrication testing apparatus by Alan E. Flowers. 20 p.
3. September. An investigation of the road making properties of Missouri stone and gravel by W. S. Williams and R. Warren Roberts. 70 p.
4. Not published.

VOLUME 3, 1912

1. March. The use of metal conductors to protect buildings from lightning by E. W. Kellogg. 55 p.
2. June. Firing tests of Missouri coal by H. N. Sharp. 44 p.
3. September. Report of steam boiler trails under operating conditions, by A. L. Wescott. 21 p.
4. Not published.

VOLUME 4, 1913

1. March. Economics of rural distribution of electric power by L. E. Hildebrand. 50 p.
2. June. Comparative tests of cylinder oils by M. P. Weinbach. 28 p.
3. Artesian waters in Missouri by A. W. McCoy. 73 p. 1913.
4. Friction tests of lubricating greases and oils by A. L. Wescott. 72 p. 1913.

VOLUME 5, 1914

14. Effects of heat on Missouri granites by W. A. Tarr and L. N. Neuman. 64 p. 1914. Out of print.

15. A preliminary study relating to water resources of Missouri by T. J. Rodhouse. Out of print.
16. The economics of electric cooking by P. W. Gumaer. 62 p. 1915. Out of print.
17. Earth roads and oiling of roads by H. A. LaRue. 30 p. 1916. Out of print.
18. Heat transmission through boiler tubes by Edwin Allen Fessenden and J. William Haney. 1916. 74 p. Out of print.
19. Geology of Missouri, by E. B. Branson, professor of geology, University of Missouri. 172 p. 1918. Out of print.
20. Energy necessary to shear steel at high temperatures by Guy D. Newton, associate professor of engineering drawing and machine design, University of Missouri. 16 p. 1920. Out of print.
21. Water supply and sewage disposal for country homes by E. J. McCaustland, dean of engineering experiment station, University of Missouri. 36 p. 1920.
22. Study relating to the water resources of Missouri by T. J. Rodhouse, professor of hydraulic engineering, University of Missouri. 57 p. 1920.
23. Experiments on the Extraction and Recovery of Radium from Topical American Carnotite Ores including Contributions to Methods of Measuring Radium by Howard H. Barker. 87 p. 1923.
24. The Grading of Earth Roads by Harry A. LaRue Associate Professor of Highway Engineering 24 p. 1923.
25. Experiments on Sunflower Seed Oil by H. E. French and H. O. Humphrey Feb. 14, 1926 p. 27.

EXTENSION SERIES

Published irregularly

Edited by Charles H. Williams

This series of bulletins is the official publication of the Extension division of the University, object of which is to "serve citizens of the commonwealth who are unable to attend established institutions; to guide them in the pursuit of a more effective education; to give every person in the state an opportunity to get the most complete education possible at the lowest practicable cost; to make the University the center of every movement which concerns the interests of the state; and to bring the University and the home in close touch."

Copies of these bulletins may be obtained from the university publisher.

1. April, 1913. A new departure for University extension. 4 p. Out of print.
2. July, 1913. School improvement agencies. Suggestions for superintendents and principals by W. W. Charters, 15 p.
3. October, 1913. Consolidation of schools of Missouri by R. H. Emberson. 20 p. Out of print.
4. November, 1913. Correspondence courses in high school subjects. 8 p.
5. December, 1913. Announcement of the extension division. Out of print.
6. Preservation of food in the home by Louise Stanley and May E. McDonald. 1914.
7. Care of free text-books by Henry O. Severance. 1914.
8. Announcement of the extension division, 1914-15.
9. Abnormal and defective children by W. H. Pyle, 1914.
10. Correspondence courses in high school subjects. 1914.
11. House fly by M. P. Ravenel, 1914.

12. Correspondence courses in high school subjects, 1915.
13. Announcement of the Extension Division, 1915-16.
14. Technical manual arts for general educational purposes by Ira S. Griffith, 1916
15. Country roads. Part 1. Road drainage; Part 2. Culverts by F. P. Spaulding. 1916.
16. Handwork in grades 1 to 6, by Ella V. Dobbs and Juliaetta Zeits.
17. Not published.
18. Not published.
19. Correspondence courses in high school subjects. 1916. Out of print.
20. Announcement of the extension division. 1916-17.
21. Manual of mental and physical examinations. 1916. Out of print.
22. Better highways by E. J. McCaustland.
23. Feeding of children by Hildegrade Kneeland, instructor in home economics University of Missouri. 12 p. 1917.
24. Feeding the baby, by Louise Stanley, associate professor of home economics. 11 p. 1917.
25. Announcement of the extension division. 1917.
26. Extension division announcement 1919-20. 1919.
27. Extension division announcement of courses 1919-20. 1919.
28. Extension division announcement 1920-21. 1920.
29. Manual for the mental and physical examination of school children (revised) by William Henry Pyle. 40 p. 1920. Our of print.
30. Extension Division Announcement 1921-22 36 p. 1921.
31. Extension Division Announcement 1922-23 31 p. 1922.
32. Extension Division Announcement of Correspondence Courses 1923-24. 1923. 8 p.
33. Extension Division Announcement of University Library Books for loan 7 p. 1923.
34. Extension Division Announcement 1924-25. 30 p. September.
35. Extension Division Announcement 1924-25. 20 p. October.
36. Plays and Recitations. 11 p. 1923.
37. Extension Class Courses Announcement 1924-25 8 p. 1924.
38. Correspondence Courses in High School Subjects 7 p. 1924.
39. Extension Division Announcement of Correspondence Courses, 1925-26. 24 p. 1925.
40. Extension Division Announcement 1925-26. 38 p. 1925. March 1.
41. Extension Class Courses Announcement 1925-26 19 p. 1925 March 10.
42. Plays and Recitations. 19. p. 1925.
43. Visual Education Service Catalog of Slides, Films and Other Visual Aids. 23 p. 1925.
44. Extension Division Announcement of Correspondence Courses, 1926-27. 26 p. 1926.

JOURNALISM SERIES

Published irregularly

Edited by Robert S. Mann

This series of bulletins discusses problems of the newspaper office. Both the editorial and business departments are considered.

Copies of these bulletins may be obtained from the Dean of the school of journalism.

VOLUME 1

1. April, 1912. Missouri laws affecting newspapers compiled by Walter Williams. 66 p. Out of print.
2. May, 1912. Journalism week in print. 64 p.
3. July, 1912. Retail advertising and the newspaper by Joseph E. Chasnoff. 47 p. Out of print.
4. March, 1913. The news in the country paper by Charles G. Ross. 44 p. Out of print.
5. May, 1913. Journalism week, 1913. 63 p.
6. Building a circulation: Methods and ideals for small-town newspapers by J. B. Powell, instructor in advertising. 42 p. 1914.
7. The editorial page, by Robert S. Mann, assistant in journalism.
8. Journalism week, 1914.
9. The world's journalism by Walter Williams, dean of the school of journalism.
10. Newspaper efficiency in the small town, by J. B. Powell, instructor in advertising. Out of print.
11. Journalism week, 1915.
12. Deskbook of the school of journalism, edited by Charles G. Ross, associate professor of journalism. 1915. 84 p. Out of print.
13. The journalist's library: Books for reference and reading, by Charles E. Kane, assistant in journalism. 89 p. 1916. Out of print.
14. Making the printed picture: A treatise on photoengraving methods, by Herbert W. Smith, instructor in illustrative art. 8 p. 1916. Out of print.
15. The law and the newspaper by Frederick W. Lehmann. 26 p. 1917. Out of print.
16. The journalism of Japan, by Frank L. Martin, professor of journalism, University of Missouri. 38 p. 1918.
17. Problems of advertising. Addresses delivered in journalism week 1918, by George Eads, N. A. Huse and M. P. Linn. 20 p. 1918. Out of print.
18. "The Missouri Intelligencer and Boon's Lick Advertiser." A brief history of the first American newspaper west of St. Louis by E. W. Stephens.
19. Deskbook of the school of Journalism, sixth edition 1919 revised by Robert S. Mann, assistant professor of journalism, University of Missouri. 80 p. 1919.
20. The small town newspaper as a business. 20 p. 1919.
21. Deskbook of the school of journalism, seventh edition 1920 revised by Robert S. Mann. 80 p. 1920.
22. A Newspaperman's Library (Revised edition) by Claire E. Ginsburg Librarian, School of Journalism University of Missouri 123 p. 1921.
23. Picture plates for the Press. Some Mechanical Phases of News and Advertising Illustration by Herbert W. Smith, Assistant Professor of Advertising, University of Missouri 64 p. 1921.
24. Some Points on the Law of the Press by Rome G. Brown of the Minneapolis Bar. 39 p. 1922.
25. Special Phases of Journalism Addresses from Nine Viewpoints, delivered at the School of Journalism of the University of Missouri. 52 p. 1922.

26. The Journalism of China by Don D. Patterson, Assistant Professor of Journalism. 89 p. 1922.
27. Missouri Alumni in Journalism. Graduates and Former Students of the School of Journalism, University of Missouri 86 p. 1923.
28. News and the Newspaper from Addresses by Editors, Writers and Readers at the Fourteenth Annual Journalism Week. 124 p. 1923.
29. The Writer and the Publisher Addresses delivered at the Fifteenth Annual Journalism Week at the University of Missouri, May 12-17, 1924 72 p.
30. Women and the Newspaper from Addresses and Discussions by Women Editors, Feature Writers, Advertising Experts and Women Readers at the Fifteenth Annual Journalism Week with Introduction by Sara L. Lockwood, Assistant Professor of Journalism. 29 p. 1924.
31. Illustration in Advertising by Horatio B. Moore, Instructor in Photo-Illustration 35 p. 1924.
32. Journalistic Ethics and World Affairs. Addresses delivered at Fifteenth Annual Journalism Week at the University of Missouri, May 12-17, 1924. 31 p. 1924.
33. Deskbook of the School of Journalism, eighth edition; revised, 1925, by Robert S. Mann, Associate professor of Journalism.
34. Missouri Alumni in Journalism. A Directory of the Graduates and Former Students of the School of Journalism, Univ. of Mo. compiled and edited by Sara L. Lockwood, Assistant Professor of Journalism. 86 p. 1925.
35. Advertising and Publicity. Addresses Delivered at the Sixteenth Annual Journalism Week at the University of Missouri, May 4-8, 1925 32 p. 1925.
36. Journalism Week, 1925. Addresses delivered at the School of Journalism of the University of Missouri. 88 p. 1925.
37. Recent Books for Journalists by Besse B. Marks, 35 p. 1925.
38. The Circulation of the Small-City Daily, by Orland Kay Armstrong.
39. Beginnings of Modern Journalism a comparative study of St. Louis newspapers from 1875 to 1925, by Orland Kay Armstrong,
40. Dedication of a Stone from St. Paul's Cathedral, a report of exercises held at the School of Journalism of the University of Missouri on Nov. 10, 1925. 31 p.

LAW SERIES

Published quarterly

Faculty Board of Editors: Guy V. Head, Stephen I. Langmaid, James W. Simonton.

"The purpose of the law series of the bulletin will be to offer to the lawyers of Missouri articles dealing with Missouri law or with questions of federal law which have arisen or are likely to arise in Missouri, as well as short notes on recent Missouri decisions."

Copies may be obtained from the Dean of the Law School.

1. Estates tail in Missouri, by Manley O. Hudson, professor of law.
2. Estates by the marital right and by the courtesy in Missouri, by Charles K. Burdick, professor of law.
3. The rule against perpetuities in Missouri, by Manley O. Hudson, professor of law.

4. The real party in interest statute in Missouri, by George L. Clark, professor of law.
   Limitations of personal property by Manley O. Hudson, professor of law.
5. Conditions subsequent in conveyances in Missouri, by Manley O. Hudson, professor of law.
6. The writ of certiorari in Missouri, by J. P. McBaine, professor of law.
7. Tort liability for negligence in Missouri.—I. The duty to use care, by George L. Clark, professor of law.
8. Land tenure and conveyances in Missouri, by Manley O. Hudson, professor of law; index to law series, 1-8.
9. Preliminary stock subscription agreements in Missouri, by Manley O. Hudson, professor of law.
10. Some aspects of the status of children in Missouri, by Eldon R. James, professor of law.
11. Executory limitations of property in Missouri, by Manley O. Hudson, professor of law.
12. Tort liability for negligence in Missouri.—II. Legal or proximate cause. III. Contributory misconduct of the plantiff, by George L. Clark, professor of law.
13. The proposed regulation of Missouri procedure by rules of court, by Manley O. Hudson, professor of law.
    Certiorari from the Missouri supreme court to the court of appeals by J. P. McBaine, professor of law.
14. Transfer and partition of remainders in Missouri by Manley O. Hudson, professor of law, University of Missouri. Notes on recent Missouri cases. 57 p. 1917.
15. Some problems in hearsay and relevancy in Missouri by E. W. Hinton, professor of law, University of Missouri. Notes on recent Missouri cases. 40 p. 1917.
16. Equitable servitudes in Missouri by George L. Clark, professor of law, University of Missouri. Notes on recent Missouri cases. Index to law series 1-16. 60 p. 1917.
17. Bar bulletin. Equitable relief against nuisances and similar wrongs in Missouri by George L. Clark, professor of law, University of Missouri. Notes on recent Missouri cases. 71 p. 1919.
18. Bar bulletin. Payment of debt to foreign representatives or heirs by Robert B. Fizzell. Notes on recent Missouri cases. 52 p. 1920.
19. Bar bulletin. Local and special legislation by Roscoe E. Harper. Notes on recent Missouri cases. 76 p. 1920.
20. Bar bulletin. Local and special legislation (concluded) by Roscoe E. Harper. Notes on recent Missouri cases. 84 p. 1920.
21. Bar bulletin. Larceny of Referendum Petitions by Kenneth C. Sears. Notes on Recent Missouri Cases. 56 p. 1921.
22. Bar bulletin. Larceny of Referendum Petitions (Concluded) by Kenneth C. Sears. Notes on Recent Missouri Cases. 71 p. 1921.
23. Bar bulletin. Transfer of Property by a Pledgee by James Lewis Parks 63 p. Notes on Recent Missouri Cases. 1922.
24. Bar Bulletin Certiorari as Used by the Supreme Court in the Interest of Harmony of Opinion and Uniformity of the Law by Waller W. Graves. Notes on Recent Missouri Cases. 75 p. 1922.

25. Bar bulletin. Missouri Bar Association, St. Louis, Dec. 15-16. Ultra Vires Transactions by James Lewis Parks. Notes on Recent Missouri Cases. 78 p. 1922.
26. Bar bulletin. Ultra Vires Transactions (Concluded) by James Lewis Parks. Notes on Recent Missouri Cases. 54 p. 1923.
27. Bar bulletin. Declarations of Trusts and the Statute of Uses by James Lewis Parks.
    The Law School Curriculum as seen by the Bench and the Bar by Cuthbert W. Pound.
    A Discussion of Judge Pound's Paper by J. P. McBaine. Notes on Recent Missouri Cases. 76 p. 1923.
28. Bar bulletin. Statutory Covenants for Title in Missouri by J. W. Simonton. Notes on Recent Missouri Cases. 54 p. 1923.
29. Bar bulletin. Legal Education and American Law Institute by Herbert S. Hadley.
    The Domicile of a Married Woman by James Lewis Parks.
    Program of Missouri Bar Association by Guy A. Thompson.
    Notes on Recent Missouri Cases. 54 p. 1924.
30. Bar bulletin. The Extraordinary Writ of Prohibition in Missouri by J. P. McBaine.
    Judicial Control of the Missouri Public Service Commission by James W. Simonton.
    Notes on Recent Missouri Cases. 63 p. 1924.
31. Bar bulletin. The Extraordinary Writ of Prohibition in Missouri (continued) by J. P. McBaine.
    Judicial Control of the Missouri Public Service Commission (continued) by James W. Simonton.
    Notes on Recent Missouri Cases. 82 p. 1924.
32. Bar bulletin. The Extraordinary Writ of Prohibition in Missouri (concluded) by J. P. McBaine.
    Notes on Recent Missouri Cases. 90 p. 1925.
33. Bar bulletin. Contracts for the Benefit of Third Persons by James Lewis Parks. Notes on Recent Missouri Cases. 50 p. 1925.

LIBRARY SERIES

Published irregularly

Edited by Henry Ormal Severance

The purpose of this bulletin is to furnish a medium for the publication of bibliographical researches, papers on library science, and such other material pertaining to library work as may be of interest to the people of Missouri and to libraries and institutions of the state.

Copies may be obtained from the Librarian.

VOLUME 1

1. 1908. Annual report of the librarian 1908. Appendix contains list of scientific serials in the libraries of the University. 60 p.
2. August, 1910. List of periodicals currently received by the libraries. 20 p. Out of print.
3. September, 1910. Handbook of the libraries. 42 p. Out of print.

4. April, 1912. Books for farmers and farmers' wives by Henry O. Severance, librarian. 24 p.
5. July, 1912. Partial bibliography and index of the publications of the college of agriculture and the agricultural experiment station, by Henry O. Severance, librarian. 19 p.
6. January, 1914. Check list of the official serial publications of the University. 44 p. Out of print.
7. Whole No. 7, A library primer for Missouri high schools, by Henry O. Severance, librarian. 1915. 20 p. Out of print.
8. Whole No. 8. Opening exercises of the new library building. Jan. 6, 1916. By Henry O. Severance, librarian. 1916. 22 p.
9. Whole No. 9. Check list of the official serial publications of the University 1914, 1915, 1916. Out of print.
10. Check list of the official serial publications of the University of Missouri, edition 2, compiled by Henry O. Severance, librarian. 1921.
11. List of Periodicals Currently Received by the University Library 1921.
12. Check List of the Official Serial Publications of the University. 1926. Edition 3.

LITERATURE SERIES

Publication ceased

1. The congress of letters, by Fred Newton Scott, professor of rhetoric in the University of Michigan. 16 p. 1917.
2. An odious comparison by George Morlin, professor of Greek in the University of Colorado. 15 p. 1917.

MEDICAL SERIES

Publication ceased

"This series will be issued quarterly and is devoted primarily to topics within the general field of hygiene and preventive medicine. These bulletins will be illustrated and popular in character and as thorough and practical as possible."

Copies may be obtained from the librarian.

1. Bacteria and disease, by O. W. H. Mitchell, associate professor of pathology and bacteriology. 39 p. 1913.
2. Prevention of typhoid fever, by W. J. Calvert, professor of preventive medicine. 38 p. 1913.
3. Prevention of contagious diseases in school children, by W. J. Calvert. 1913. 31 p.
4. On resuscitation, by D. H. Dolley, professor of pathology. 29 p. 1913.
5. The relation of sight and hearing to early school life by Guy L. Noyes, acting dean of the faculty of medicine and formerly professor of diseases of the eye and ear. 34 p. 1914.
6. The prevention of tuberculosis, by O. W. H. Mitchell. 36 p. 1914.
7. Water—the prevention of its pollution, by O. W. H. Mitchell. 19 p. 1914.
8. Preventive medicine, its accomplishments and its aims, by M. P. Ravenel, professor of medical bacteriology and preventive medicine. 24 p. 1915.

9. The early diagnosis and treatment of cancer, by F. A. Martin, instructor in pathology. 12 p. 1915.
10. The prevention of malaria, by Elbert L. Spence, instructor in preventive medicine and medical bacteriology. 20 p. 1915.
11. Headache a symptom: its causes, prevention and cure, by Walden E. Muns, instructor in pathology. 34 p. 1916.

RURAL EDUCATION SERIES

Edited by Richard Huff Emberson

VOLUME 1

1. August, 1909. Ten lessons on the study of Indian corn, prepared by M. F. Miller and arranged by R. H. Emberson. (Not numbered.) Our of print.
2. October, 1909. The soil. Prepared by R. H. Rmberson. (Numbered v. 10, No. 10. General series.) Out of print.
3. January, 1910. The horse. Prepared by R. H. Emberson. (Numbered v. 10, No. 11. General series.)
4. February, 1911. A study of cattle. (Numbered v. 12, No. 4. Rural education series.) Out of Print.
(Continued in the extension series of the University of Missouri bulletins.)

SCIENCE SERIES

Publication ceased

Edited by George Lefevre

The science series of the bulletin is devoted to the publication of short original papers, preliminary announcements of results of research, and of articles of a general or popular character which are of sufficient interest and importance to warrant their publication.

Copies may be obtained from the librarian.

VOLUME 1

Non-technical lectures on the sciences, by members of the faculty of the University of Missouri.

1. The unity of science by Arthur O. Lovejoy, formerly professor of philosophy. 34 p. 1912. 30 cents.
2. Mathematics, by Earle R. Hedrick, professor of mathematics. 19 p. 1912. 25 cents.
3. Physics, by Oscar Milton Stewart, professor of physics. 22 p. 1912. 25 cents.
4. Chemistry, by William George Brown, professor of industrial chemistry 26 p. 1912. 25 cents.
5. Astronomy, by Herbert Meredith Reese, assistant professor of physics. 17 p. 1913. 25 cents.
6. Geology, by Curtis Fletcher Marbut. 1913.
7. Botany, by C. Stuart Gager. 1913.
8. Experimental zoology, by Winterton Conway Curtis.
9. Evolutional zoology, by George Lefevre. May, 1914.

VOLUME 2

1. The implantation of the glochidium on the fish, by Daisy Young, assistant in zoology. 22 p. plates 3. 1911. 50 cents. Out of print.
2. Notes on the Ohio shales and their faunas, by E. B. Branson, professor of geology. 16 p. plates 3. 1911. 50 cents. Out of print.
3. The blonde race and the Aryan culture, by Thorstein B. Veblen. 19 p. 1913. 25 cents. Our of print.
4. The Devonian fishes of Missouri by E. B. Branson. 1914. 25 cents.

SOCIAL SCIENCE SERIES

Publication ceased

Edited by Norman Maclaren Trenholme

The social science series of the bulletin aims to provide for the publication of brief studies or accounts of political, social, economic or historical character which will be of interest and value to the people of the state.

VOLUME 1

1. The loan office experiment in Missouri, 1821-1836 by Albert J. McCulloch. 13 p. 1914. 25 cents.
2. The Monroe Doctrine—its origin, development, and recent interpretation, by Frank Fletcher Stephens. 26 p. 1916.
3. The social survey, its history and methods, by Carl C. Taylor, associate professor of sociology. 91 p. 1919. Out of print.

THE PUBLICATIONS OF THE COLLEGE OF AGRICULTURE AND OF THE AGRICULTURAL EXPERIMENT STATION

Edited by A. A. Jeffrey

The agricultural experiment station issues the following seven series of publications: 1, Research bulletin; 2, Bulletins; 3, Circulars of information; 4, Extension circulars; 5, Extension service leaflets; 6, Boys' and Girls' Club Circulars; and 7, Project Announcements.

Research bulletins—The results of fundamental research are published in small editions and distributed among investigators and public libraries. These bulletins, are not intended for distribution among farmers.

Bulletins—These bulletins are intended to include the results of original research, but differ from the research bulletins in that the results are primarily of interest to farmers. All of the large editions of the bulletins are widely distributed among the farmers of the state. Bulletins of this series are also sent to libraries and investigators at other agricultural experiment stations.

Circulars of information—These publications do not necessarily include the results of original investigation carried on by the experiment station, but are intended to be a means of distributing to the farmers of the state valuable information on important agricultural subjects.

All publications of the experiment station available for distribution are starred.

Address Director of the agricultural experiment station for copies.

Missouri State Agricultural College Farm Bulletins

(These bulletins are out of print.)

There were twenty bulletins issued under the title, "Missouri state agricultural college farm bulletins." Number 1-8 were published in the "annual catalogue of the Missouri University at Columbia, Missouri, 1883-1884." Numbers 9-14 were published in the catalogue for 1884-1885; and numbers 15-19 in the catalogue for 1885-1886. The following bulletins were issued in separate pamphlet form: Nos. 1-8, 10-12, 14, 16, 18-21, 23-25, 29-34. Number 21 was issued only in pamphlet.

Bulletins 21-35 were issued under the title: "Missouri state agricultural college bulletin"; numbers 19-20 and 22-27 were published in the annual report of the state board of agriculture for 1886-1887; numbers 28-30 in the report for 1887-1888; and 31-35 in the report for 1888-1889. Numbers 9-12, 14, 21, and 28-33 were also issued separately. Bulletin 35 is also bulletin number 2 of the agricultural experiment station. Numbers 15, 16, and 24 were also published in the report of the dean of the college of agriculture, 1887.

1. Feeding hogs, by J. W. Sanborn, 1883. 3 p.
2. Feeding steers, by J. W. Sanborn. 1883. 5 p.
3. Report of test of varieties of wheat and corn, by J. W. Sanborn. 1883. 3 p.
4. Mulching, by J. W. Sanborn. 1883. 4 p.
5. Relation of tillage to soil moisture, by J. W. Sanborn. 1883. 3 p.
6. Relation of dew to soil moisture, by J. W. Sanborn. 1883. 5 p.
7. Feeding what and corn, by J. W. Sanborn. 1884. 4 p.
8. Meal feeding stock at pasture, by J. W. Sanborn. 1884. 4 p.
9. Grass-fed pigs, by J. W. Sanborn. 1884. 4 p.
10. Pig feeding experiments, by J. W. Sanborn. 1884. 4 p.
11. Corn fodder as stock food, by J. W. Sanborn. 1884. 4 p.
12. Seed potatoes, by J. W. Sanborn. 1884. 4 p.
13. Good roads and broad wheel tires, by J. W. Sanborn, 1884. 7 p.
14. Feeding for lean meat, by J. W. Sanborn. 1885. 6 p.
15. Contagious pleuro-pneumonia, by Paul Paquin. 1885. 5 p.
16. Glanders. Second report of state veterinarian, by Paul Paquin, 1885. 8 p.
17. General observations, by J. W. Sanborn. 1885. 4 p.
18. Sub-soiling, by J. W. Sanborn. 1885. 5 p.
19. Feeding for lean meat, by J. W. Sanborn. 1886. 6 p.
20. Report of investigations and observations in the horticultural department, by L. R. Taft. 1886. 6 p.
21. Plants and their uses, by S. M. Tracy. 1888. Chart.
22. Corn harvesting by J. W. Sanborn. 1886. 6 p.
23. Relation of dew to soil moisture, by J. W. Sanborn. 1886. 14 p.
24. Report of state veterinary inspector, Paul Paquin. 1886. 22 p.
25. Data regarding several economic problems in ordinary farm practice, by J. W. Sanborn. 1886. 7 p.
26. Report of trials of varieties of vegetables and fruits, by L. R. Taft. 1887. 7 p.
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12. Black leg, by Paul Paquin. 1890.
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128. Spraying for the Second Brood of Codling Moth, A. P. Boles, 1923, 4 p.
*129. Summer Chinch Bug Control, Leonard Haseman, 1923, 4 p.
*130. Missouri Cow Testing Associations, E. M. Harmon, 1923, 12 p.
*131. Liming Missouri Soils, P. F. Schowengerdt, 1923, 16 p.
*132. Soil Improvement by the Missouri Plan, M. F. Miller, 1923, 4 p.
*133. How to Choose Commercial Fertilizers, M. F. Miller, 1923, 4 p.
134. Insect Pests of Garden Crops, L. Haseman, 1923, 8 p.
*135. Increasing the Farmer's Net Income by Reducing Costs, O. R. Johnson 1923, 16 pp.
*136. The Mid-West System of Marketing Cooperative Livestock Shipments, True D. Morse, 1923, 8 p.
137. Strawberries in the Ozarks, A. P. Boles, 1923, 4 p.
138. Demonstration Work With Potatoes in Missouri, E. M. Page, 1924, 8 p.
*139. Feeding Grain to Suckling Lambs, R. L. Waddell, 1924, 4 p.
*140. Production of Sunflower Seed in Missouri, H. C. Hensley, 1924, 8 p.
*141. Spraying Grapes in Missouri, A. P. Boles, 1924, 4 p.
*142. Cluster-Bud Spray for Apples, A. P. Boles, 1924, 4 pp.
*143. The Calyx Spray for Apples, Pears and Quinces, A. P. Boles, 1924, 4 p.
144. The Third Summer Spray for Apples, A. P. Boles, 1924, 4 p.
145. The Missouri Colony Brooder House, H. L. Shrader, 1924, 4 pp.

*146. The Pocket Gopher and How to Control It. Otis Wade, 1924, 4 p.
147. Fourth and Fifth Summer Sprays for Apples, A. P. Boles, 1924, 4 p.
*148. The Family Medicine Chest, Mary E. Stebbins, 1924, 4 p.
*149. The Essentials of Wheat Production in Missouri, D. W. Frear, 1924, 8 p.
*150. Spraying for the Second Brood of Codling Moth, A. P. Boles, 1924, 4 p.
*151. Home Made Poultry Equipment, Berley Winton and W. C. Boney, 1924 16 p.
*152. Hogging Down Corn, L. A. Weaver, 1924, 4 p.
153. Liming Materials, P. F. Schowengerdt. 1924. 4 pp.
*154. Selecting Seed Corn, K. G. Harman, 1924, 4 p.
155. How to Keep the Cost of Production on Corn, D. C. Wood and B. H. Frame, 1924, 12 p.
*156. Fattening Calves for Market, H. M. Garlock, 1924, 8 p.
*157. Community Organization, B. L. Hummel, 1925, 4 p.
*158. Handling Explosives on the Farm, A. J. McAdams, 1925, 16 p.
*159. Stockyard Equipment for Live Stock Shipping Associations, True D. Morse, 1925, 8 p.
*160. Harvesting the Missouri Grape Crop, A. P. Boles, 1925, 16 p.
*161. Prorating Expenses on Co-operative Shipments of Livestock, True D. Morse, 1925, 12 p.
*162. Trend of Live Stock and Feed Prices by Months, J. W. Burch, 1925, 12 p.
*163. Increasing Potato Yields, E. M. Page, 1925, 12 p.
164. The Calyx Spray, A. P. Boles, 1925, 4 pp.
165. The Third Summer Spray, A. P. Boles, 4 pp.
166. Spraying Grapes in Missouri, A. P. Boles, 1925. 8 p.
*167. Working Heights for Kitchen Equipment, Fra Clark, 1925, 8 p.
*168. Incorporation Plans for Fruit Marketing Organizations, H. C. Hensley, 1925, 32 p.
*169. The Non-Profit Cooperative Marketing Act of 1923, H. C. Hensley, 1925, 16 p.
*170. Culling the Farm Flock, H. L. Shrader, 1925, 16 pp.
*171. Home Millinery, Mary E. Robinson, 1925, 34 p.

EXTENSION SERVICE LEAFLETS

*1. Children Need Milk, Essie M. Heyle, 1919, 2 p.
2. Temperature, Mrs. Louise Selbert, 1919, 2 p.
*3. Constipation, Mrs. Louise Selbert, 1919, 1 p.
4. Meal Planning, Essie M. Heyle, 1919, 2 p.
5. Healthful Clothes for Children, Mary Robinson, 1919, 2 pp.
*6. Some Substantial Milk Dishes, Lillian Whaley, 1919, 2 p.
*7. Milk Desserts, Lillian Whaley, 1919, 2 p.
*8. Keeping Physically Fit, Mrs. Louise Selbert, 1919, 2 p.
9. The Family Medicine Chest, Mrs. Louise Selbert, 1919, 2 p.
10. Cause and Treatment of Boils, Mrs. Louise Selbert, 1919, 2 p.
11. Winter Dairy Rations, M. H. Keeney, 1919, 2 p.
*12. The Modern Rural Home and Health, Essie M. Heyle, 1920, 2 pp.
13. Covered or Stinking Smut of Wheat, G. M. Reed, 1920, 2 pp.
*14. Simple Water Systems for Farm Homes, E. W. Lehmann, 1921, 2 p.
*15. Hot and Cold Water in the Farm Home. E. W. Lehmann, 1921, 2 p.

*16. Gravity System Water Supply for the Farm Home, E. W. Lehmann, 1921, 2 p.
*17. Pneumatic Water Systems for the Farm Home, E. W. Lehmann, 1921, 2 p
*18. Separating Cracked and Whole Soybeans, D. W. Frear, 1922, 2 p.
19. Growing Field Beans, W. C. Etheridge, 1923, 2 p.
*20. Broom Corn Production, C. E. Carter, 1923, 2 p.
21. Fourth Summer Spray for Apples, A. P. Boles, 1923, 2 p.
22. Dormant Spraying for Fruit Trees, A. P. Boles, 1923. 2 p.
23. Changes in the Methods of Canning Vegetables, Essie M. Heyle, 1924, 2 p.
24. Tomato Plant Bed Spraying, E. M. Page, 1925, 2 p.

BOYS' AND GIRLS' CLUB CIRCULARS

1. Garment Making I, Mrs. J. K. Fyfer, Essie M. Heyle and T. T. Martin, 1922, 52 p.
2. Garment Making II, Mrs. J. K. Fyfer, Essie M. Heyle and T. T. Martin, 1922, 40 p.
3. Baby Beef Club, H. M. Garlock, Mrs. J. K. Fyfer, and T. T. Martin, 1923, 30 p.
4. Poultry Club, T. S. Townsley, Mrs. J. K. Fyfer and T. T. Martin, 1923, 34 p.
5. Potato Club, E. M. Page, Mrs. J. K. Fyfer and T. T. Martin, 1923, 28 p.
6. Corn Clubs, D. W. Frear, Mrs. J. K. Fyfer and T. T. Martin, 1923, 24 p.
7. Canning Club I, Essie M. Heyle, Mrs. J. K. Fyfer and T. T. Martin, 1923, 23 p.
8. Canning Club II, Essie M. Heyle, Mrs. J. K. Fyfer and T. T. Martin, 1923, 27 p.
9. The Tomato Club, E. M. Page, Mrs. J. K. Fyfer and T. T. Martin, 1923, 24 p.
10. Garment Making III, Essie M. Heyle, Mrs. J. K. Fyfer, and T. T. Martin 1923. 32 p.
11. The Sow and Litter Club, J. W. Burch and T. T. Martin, 1924, 32 p.
12. The Dairy Calf Club, E. M. Harmon and T. T. Martin, 1924, 38 p.
13. The Club Song Book, T. T. Martin, R. H. Emberson and Jane Hinote, 1924, 39 p.
14. The Grain Judging Club, C. E. Carter and T. T. Martin, 1924, 32 p.
15. Health and First Aid Club, Mary E. Stebbins, Jane Hinote and T. T. Martin, 1925, 37 p.
16. The Flock Management Club, H. L. Shrader and T. T. Martin, 1925, 27 p.

PROJECT ANNOUNCEMENTS

1. Annual Report of State Leader of Farm Advisers, A. J. Meyer and D. H. Doane, 1915, 11 p.
2. Agricultural Collections for School Laboratories, A. J. Meyer, 1915, 20 p.
3. Boys' and Girls' Clubs, A. J. Meyer, 1916, 24 p.
4. School Exhibits and Contests, A. J. Meyer and D. H. Doane, 1915, 26 p.
5. Extension Projects in Agriculture and Home Economics, A. J. Meyer, 1915, 12 p.
6. Farmers' Week, January 3-7, 1916, A. J. Meyer, 1915, 58 p.
7. The Work of the Agricultural Extension Service, A. J. Meyer and F. B. Mumford 1916, 44 p.

8. Women's Club, A. J. Meyer and Bab Bell, 1916, 11 p.
9. Boys' and Girls' Clubs, A. J. Meyer, R. H. Emberson, G. W. Reavis and Addie Root, 1916, 23 p.
10. Farmers' Week, January 1-5, 1917, A. J. Meyer, 1916, 48 p.
11. Extension Schools in Agriculture, A. J. Meyer and W. H. Hargrove, 1917 16 p.
12. Agricultural Extension Work, A. J. Meyer, 1919, 54 p.
13. Annual Report of Agricultural Extension Service 1920, P. H. Ross, 1921, 36 p.
14. Extension Projects in Agriculture and Home Economics, A. J. Meyer, 1922, 23 p.
15. Demonstration Farm Flocks and Certified Poultry Breeding, T. S. Townsley and A. J. Meyer, 1922. 7 p.
16. Thirty Years of Extension Work, A. J. Meyer, 1922, 112 p.
17. Boys' and Girls' Club Work, A. J. Meyer and R. H. Emberson, 1923, 16 p
18. Extension Project in Agriculture and Home Economics, A. J. Meyer, 1923, 24 p.
19. Project Announcement, A. J. Meyer, 1924, 8 p.
20. Taking the College to the People, A. J. Meyer, 1924, 68 p.
21. Boys' and Girls' Club Project, A. J. Meyer, 1925, 48 p.
22. Ten Years of Extension Work Under the Smith-Lever Act, A. J. Meyer, 1925, 16 p.

BULLETINS OF THE MISSOURI SCHOOL OF MINES

These may be obtained from the librarian of the School of Mines at Rolla, Missouri.

GENERAL SERIES

VOLUME 1

No. 1, Dec., 1908. The human side of a mining engineer's life, by Edmund B. Kirby. (Commencement address, June 10, 1908.)

No. 2, March, 1909. 38th annual catalogue, 1908-1909.

No. 3, June 1909. Education for utility and culture, by Calvin M. Woodward. (Tau Beta Pi address.)

No. 4, Sept., 1909. The history and the development of the cyanide process, by Horace Tharp Mann.

VOLUME 2

No. 1, Dec., 1909. The Jackling field, school of mines and metallurgy.

No. 2. March, 1910. 39th annual catalogue, 1909-1910. Out of print.

No. 3, June 1910. Some of the essentials of success, by Charles Summer Howe. (Commencement address, June 1, 1910.)

No. 4, Sept., 1910. Friction in small air pipes, by E. G. Harris, Albert Park, and H. K. Peterson. (Continued by technical series, vol. 1, nos. 1 and 4.)

VOLUME 3

No. 1, Dec., 1910. Some relations between the composition of a mineral and its physical properties, by G. H. Cox, and E. P. Murray.

No. 2, March, 1911. 40th annual catalogue, 1910-1911.
No. 3, June, 1911. Providing for future generations, by E. R. Buckley. (Tau Beta Pi address, May 24, 1911.)
No. 4, Sept. 1911. Fall announcement of courses. Out of print.

VOLUME 4

No. 1, Dec., 1911. Fortieth Anniversary of the school of mines and metallurgy of the University of Missouri. Parker Hall memorial address. Laying of cornerstone of Parker Hall, Rolla, Missouri. October 24, 1911.
No. 2. March, 1912. 41st annual catalogue, 1911-1912.
No. 3, June 1912. Mining and civilization, by J. R. Finlay. (Commencement address, May 31, 1912.)
No. 4, Sept., 1912. Fall announcement of courses. Out of print.

VOLUME 5

No. 1, Dec., 1912. Student life.
No. 2, March, 1913. 42nd annual catalogue, 1912-1913.
No. 3, never published.
No. 4, never published.

VOLUME 6

No. 1, never published.
No. 2, March, 1914. 43rd annual catalogue, 1913-14.
No. 3, never published.
No. 4, never published.

VOLUME 7

No. 1, Never published.
No. 2, March, 1915. 44th Annual Catalogue, 1914-1915.
No. 3, March, 1915. Description of special courses in oil and gas and allied subjects.
No. 4, September, 1915. Register of graduates, 1874-1915.

VOLUME 8

No. 1, Jan., 1916. Bibliography on concentrating ores by flotation. Jesse Cunningham.
No. 2, March, 1916. 45th Annual Catalogue, 1915-1916.
No. 3, June 1916. The Business of Mining. W. R. Ingalls. (Commencement address, May 26, 1916.)

No. 4, October, 1916. Register of graduates, 1874-1916. Out of print.

VOLUME 9

No. 1, Jan., 1917. Road problems in the Ozarks. E. G. Harris, Bibliography on rural roads. H. L. Wheeler.
No. 2, March, 1917. 46th Annual Catalogue, 1916-1917.

No. 3, June, 1917. What should a present-day metallurgical education comprise? Charles Hermann Fulton. (Commercial address May 25, 1917.)

No. 4, October, 1917. Register of graduates, 1874-1917. M. S. M. men in military service.

VOLUME 10

No. 1, Jan., 1918. Student life; revised edition.

No. 2. March, 1918. 74th Annual Catalogue 1917-18.

No. 3, June, 1918. The Human side of mining engineering. James Furman Kemp. (Commencement address May 24, 1918.)

No. 4, October 1918. List of publications wanted by the Library, and of duplicates available for exchange: April 1, 1920.

VOLUME 11

No. 1, January, 1919. Never published.

No. 2, March, 1919. 48th Annual Catalogue 1918-1919.

No. 3, June, 1919. Road problems in the Ozarks; 2nd edition, revised and extended. E. G. Harris. Bibliography on rural roads. H. L. Wheeler.

No. 4, October, 1919. Register of graduates, 1874-1919.

VOLUME 12

No. 1, Jan., 1920. War service records of the Missouri School of Mines. Compiled by G. E. Ebmeyer.

No. 2, March 1920. 49th Annual Catalogue, 1919-1920.

No. 3, June, 1920 (Delayed.) Contemporary novels and novelists: a list of references. H. L. Wheeler.

No. 4, Oct., 1920. Department of Vocational Eduction.

VOLUME 13

No. 1, Jan., 1921.

No. 2, March, 1922. 50th Annual Catalogue, 1920-21.

No. 3, June, 1921. Training for Exploration. H. Foster Bain, (Commencement address, April 29, 1921.)

No. 4, Oct., 1921. Department of Vocational Education.

VOLUME 14

No. 1, Jan., 1922. A Symposium of Mining and Metallurgical Education. C. H. Fulton.

No. 2, March 1922. 51st Annual Catalogue, 1921-1922.

No. 3, June, 1922. Sportsmanship in Business and Public Life. A. T. Perkins.

No. 4, Nov., 1922. Register of Graduates, 1874-1922.

VOLUME 15

No. 1, Jan., 1923. Schedule of Classes. Fall of 1923.

No. 2, March, 1923. Annual Catalogue, 1922-1923.

No. 3, June, 1923. Schedule of Classes. Spring, 1924.

No. 4, Oct., 1923. Register of Graduates, 1874-1923.

VOLUME 16

No. 1, Jan., 1924. Student Life.
No. 2, March, 1924. 53rd Annual Catalogue, 1923-24.
No. 3, June, 1924. Schedule of classes. Fall term, 1924.
No. 4, Oct., 1924. Shifting responsibility. F. A. Hall. (Commencement address, May 9, 1924.)

VOLUME 17

No. 1. Jan., 1925. Register of graduates, 1874-1924.
No. 1-A, Jan., 1925. Schedule of classes. Spring semester, 1925.
No. 2, March, 1925. 54th Annual Catalogue, 1924-1925.
No. 3, June, 1925. The Engineer. P. N. Moore, Personality, opportunity and the mining engineer. J. A. Garcia.
No. 3-A, June, 1925. Schedule of classes for the fall semester, 1925.
No. 4, Oct., 1925. Student life.
No. 4-A, Oct., 1925. Broadcast pamphlet.

VOLUME 18

No. 1, Jan. 1926. Schedule of Classes, Spring Semester 1926.

TECHNICAL SERIES

VOLUME 1

No. 1, November, 1911. Friction in air pipes. E. G. Harris. (Continuation of General Series, Vol. 2, No. 4.)
No. 2, February, 1912. Metallurgy and ore dressing laboratories of the Missouri school of Mines and Metallurgy. D. Copeland, H. T. Mann, H. A. Roesler. Out of print.
No. 3, May, 1912. Some apparatus and methods for demonstrating rock drilling and the loading of drill holes in tunneling. L. E. Young.
No. 4, August, 1912. Friction in air pipes. E. G. Harris. Continuation of Vol. 1, No. 1, November, 1911.)

VOLUME 2

No. 1, August, 1915. Comparative tests of piston drill bits. C. R. Forbes and L. M. Cummings.
No. 2, November, 1915. Orifice measurements of air in large quantities. Elmo G. Harris.
No. 3, February, 1916. Cupellation losses in assaying. Horace T. Mann and Charles Y. Clayton.
No. 4, May, 1916. Geologic criteria for determining the structural position of sedimentary beds. G. H. Cox and C. L. Dake. Out of print.

VOLUME 3

No. 1, August, 1916. Experiments from the flotation laboratory. C. Y. Clayton. Out of print.

No. 2, November, 1916. Studies on the origin of Missouri cherts and zinc ores. G. H. Cox, R. S. Dean, and V. H. Gottschalk.

No. 3, February, 1917. Preliminary report on blended Portland cement. E. S. McCandliss.

No. 4, May, 1917. Studies in the production of oils and tars from bituminous materials. J. C. Ingram.

VOLUME 4

No. 1, August, 1917. The hydrometallurgy and electrolytic precipitation of zinc. F. D. James.

No. 2, November 1917. The effect of addition agents in flotation; Part I. M. H. Thornberry and H. T. Mann.

No. 3, February, 1918 Bibliography on the roasting, leaching, smelting and electrometallurgy of zinc. H. L. Wheeler.

No. 4, May, 1918. An investigation of blended Portland cements. E. S. McCandliss and H. H. Armsby.

VOLUME 5

No. 1, August, 1919. The carbonization of Missouri cannel coals. H. L. Dunlap, K. K. Kershner and V. X. Smiley.

No. 2, Nov., 1919. The effect of addition agents in flotation; Part II. M. H. Thornberry and H. T. Mann.

No. 3, Feb., 1921. Coal mining methods in Missouri. W. W. Weigel.

No. 4, May, 1921. Coal Mining Methods in Missouri. W. W. Weigel

VOLUME 6

No. 1, Aug., 1921. The Problem of the St. Peter Sandstone. C. L. Dake.

No. 2, March, 1922. Bibliography on the Electrothermic Metallurgy of Zinc. B. M. O'Harra.

No. 3, May, 1923. Our National Defense. W. W. Wanamaker.

No. 4, Aug., 1923. Experiments on the Distillation of Zinc from Complex Zinc-Lead-Silver Ores. B. M. O'Harra and E. S. Wheeler.

VOLUME 7

No. 1, Nov., 1923. I. Subterranean stream piracy in the Ozarks. C. L. Dake and Josiah Bridge. II. Ebb and flow springs in the Ozarks. Josiah Bridge.

No. 2, Feb., 1924. Meridian determination. C. E. Bardsley.

No. 3, May, 1924. Underground loading devices. C. E. van Barneveld.

No. 4, Aug., 1924. Briquetting of zinc ores. B. M. O'Harra.

VOLUME 8

No. 1, Nov., 1924. Reduction of zinc oxide by carbon. G. A. Zeller and B. M. O'Harra.

No. 2, Feb., 1925. A treatise on Missouri clays. M. H. Thornberry.

No. 3, May, 1925. A study on reinforced concrete dams. Elmo G. Harris.

No. 4, Aug., 1925. Bibliography on Zinc retorts and condensers. B. M. O'Harra.

VOLUME 9

No. 1, Nov., 1925. Engineering and research. M. S. Ketchum.

GENERAL INDEX OF PUBLICATIONS

Abbreviations used in the index to indicate the series of publications.

Extension service leaflets, Boys' and Girls' Club Circulars, Project announcements and School of Mines bulletins are not indexed.

Studies

S	= Stud.
Sm	= Stud. Mathematics series
Ss	= Stud. Science series
Sos	= Stud. Social science series
Sl	= Stud. Lit and linguistic series
Sp	= Stud. Phil. and edu. series

Bulletins

General Series of the bulletin not indexed.

Ba	= Bul. Astronomical series
Bed	= Bul. Education series
Ben	= Bul. Engineering exp. sta. ser.
Bex	= Bul. Extension series
Bj	= Bul. Journalism series
Bl	= Bul. Law series
Blib	= Bul. Library series
Blit	= Bul. Literature series
Bm	= Bul. Medical series
Br	= Bul. Rural education series
Bs	= Bul. Science series
Bos	= Bul. Social science series

Agricultural college and experiment station publications.

Ab	= Pub. Agri. exp. sta. bulletin
Ac	= Pub. Agr. exp. sta. circulars
Abc	= Pub. Agr. exp. sta farm bul.
Aec	= Pub. Agr. exp. sta. ext. cir.
Ar	= Pub. Agr. exp. sta. research bulletin

Accredited schools. Circular Bed 1, 7, 10.
Accredited junior colleges Bed 12
Acetylene for lighting Ben v. 1 No. 1
Advertising
  Advertising and publicity Bj 35
  Building a circulation Bj 6
  Illustration in advertising Bj 31
  Retail advertising Bj 3
  Problems of advertising Bj 17
Ahmann, C. F.
  Estimation of pectin. Ar 77.
Albrecht, W. A.
  Soil inoculation Ac 86
  Growth on breeding immature animals Ar 45
  Bat guano Ab 180
  Inoculation for legumes Ac 121
Alfalfa
  Alfalfa growing in Mo. Ab 72
  Cooperative experiments. Ab 106
  Growing alfalfa Aec 6
  Handling the alfalfa crop Aec 60
  Seeding of alfalfa Ac 40
Algol variables Ba 6, 9, 15, 18 19
Allison, H. O.
  Corn silage Ab 112, 150
Antony's oriental policy Sos v. 3 No. 2
Applebud moth Ab 42
Apples Ab 10
  Appleblotch Ac 124
  Apple growing in Mo. Ab. 61
  Apple orchard Ab 49
  Apple spurs Ar 40
  "Sting" in the apple Ab 64
  Bud selection Ar 39
  Cedarrust Ac 135
  Fireblight Ac 137
  Fruitfulness Ar 32
  Missouri apple growing Ac 32
  Pruning Ac 90 Ac 120
  Selected apple recipes Aec 93
  York Ac 75
Armstrong, O, K.
  Circulation of the small daily Bj 38
  Beginnings of modern journalism Bj 39
Art
  Related art Bed 17
Artesian waters of Missouri Ben v, 4 No. 3
Asparagus Ab 43
Assyrian historiography Sos v. 3 No. 1
Astronomy Bs 5

Babies
  Feeding the baby Bex 24
  Aec 23
Backus, L. S.
  Parasites affecting farm animals Aec 13
  Parasites Ac 134
Bagworm Ab 104. Ac 92
Bacteria Bm 1
Baker, R. H. Ba 24
  25
  26
  28-33
Baker, W. H.
  Soil saving dam Aec 14
Barite deposits of Missouri Ss v. 3 No. 1
Barker, H. H. Ben 23.
Baur, P. V. C.
  Eilethyia S. v. 1 No. 4
Bell, Bab
  Canning by cold pack method. Aec 9
  Cold school lunch Aec 10
  Homemakers club Aec 19
  How to save fats Aec 46
Bees and beekeeping
  Farm beekeeping Ab 138
Bibliography of pubs. of college of agriculture Blib 5
Bird, R. M.
  Bordeaux powder. Ac 20
  New bordeaux powder. Ab 60
  Black leg Ab 12
  Blackberries Ab 231
  Blonderace Bs v. 2 No. 3

Boiler tests Ben v. 3 No. 3

Boles, A. P
Cluster-bud spray Aec 125, 142
Calyx spray Aec 126, 143, 164
Third summer spray Aec 127, 144, 145
Spraying for codling moth Aec 128, 150
Strawberries in Ozarks Aec 137
Spraying grapes in Missouri Aec 141, 166
Fourth and fifth summer sprays Aec 147
Harvesting grape crop Aec 160

Boney, W. C.
Home made poultry equipment Aec 151

Books for farmer Blib No. 4
Booth, N. O.
Test of spray nozzles Ab 50
Bordeaux powder Ab 60
Directions for making Ac 20
Botany Bs 7
Bowles, J D.
Acetylene for lighting Ben v. 1 No. 1
Boys' and girls' clubs
Exhibits and contests Aec 18
Grain judging Aec 58
Bradfield, R.
Colloidal clay Ar 60

Bradford, F. C.
Winter injury of fruit Ac 107
Fruit bud formation Ar 47
Relation of temperature to blossoming Ar 53
Winter injury Ar 56
Effect of varying moisture Ar 76

Brandt, P. M.
How to build a Guerlo silo Ac 67

Branson, E. B.
Devonian fishes of Mo. Bs v. 2 No. 4
Geology of Missouri Ben 19
Notes on the Ohio shales Bs v. 2 No. 2

Branstetter, B. B.
Corn root rot Ac 117

Bread
Bread making Ab 227 Aec 102
Making light bread Aec 11
War breads Aec 25

Brody, S.
Normal growth of domestic animals Ar 62
Change of form with age Ar 67
Skeletal growth in dairy cow Ar 80

Brown, Rome G.
Law of the press Bj 24,

Brown, Wm. G.
Chemistry Bs v. 1 No. 4

Butter
Effects of feeding cotton seed products Ar 27

Burch, J. W.
Trend of live stock Aec 162

Burroughs, A. M.
New method of making engine oil emulsions Ab 205

Calvert, W. J.
Prevention of typhoid fever Bm 2
Prevention of contagious diseases Bm 3

Canning
By cold pack method Aec 9, 52

Calves
Birth weight Ac 35
Composition of bovine at birth Ar 38
Raising calves Aec 81 Ac 88
Raising with skim milk Ab 47, 57

Cancer, Bm 9
Cardinell, H. A.
Condensed information on sprays Aec 99
Melon pest control Aec 110
Winter injury Ar 56

Carotin Ar 9, 10, 11, 12

Carter, C. E.
Grain judging Aec 104
Sudan grass Aec 120
Sweet clover Aec 11

Cattle Br 4
Beef cattle Ab 24
Beef production on high priced land Ac 24
Composition of flesh of cattle Ab 25
Control of infectious abortion Ab 201
Dairy bull Ac 126
Composition of beef animals Ar 30
Effect of limited food Ar 18
Factors in beef production Ac 12
Fattening cattle for market Ab 76
Fattening cattle on blue grass Ab 90
Feeding tests Ab 28
Guernsey sires Ar 79
Holstein Friesian sires Ab 217
Jersey sires Ab 206
Maintenance Ar 18
Wintering yearlings Ab 75

Chandler, W. H.
Combating orchard and garden enemies Ab 102
Commercial fertilizers for strawberries Ab 113
Cooperation among fruit growers Ab 97
Hardiness of peach buds Ac 31
Instructions for spraying Ac 34
Killing plant tissue by low temperature Ar 8
Sap studies Ar 14
Winter killing of peach buds Ab 74
Chanson de Williame Sl v. 2

Charters, W. W.
Course in grammar Bed 8
Rural school consolidation Bed 2
School improvement agencies Bex No. 2

Chasnoff, J. E.
Retail advertising Bj No. 3
Check list of serial pubs. of University Blib 6, 9
Chemistry Bs 4
Cheese
Cheese making Aec 30
Cottage cheese making Aec 50
Chinch bug Ab 51 Ac 1, 2, 62 Aec 4, 116
Childers, L. F.
Growing alfalfa Aec 6
Children
Abnormal Bex 9
Born out of wedlock Sos. v. 3 No. 3
Feeding Bex 23, 24
Feeding the baby Bex 24
Mental and physical exam. Bex 21. 29
Status in Missouri Bl 10
Clark, Fra
Working heights for kitchen equipment Aec 167

Clark, Geo. L.
Equitable relief against nuisances Bl 17
Equitable servitudes in Missouri Bl 16
Real property Bl 4
Tort liability for negligence Bl 7, 12

Clark, J. W.
Apples at various stages of growth Ab 10
Covering peach trees Ab 16
Seed germination Ab 6
Spraying for codling moth Ab 13
Clothing industry Sos v. 1
Clover Ac 6 Aec 106
Liming for clover Aec 61
Seeding of clovers Ac 42
Sweet clover Aec 36
Coal, Missouri Ben v. 2 No. 1; v. 3 No. 2
Colds
Cause and treatment Aec 79
College of agriculture. Publications
Bibliography and index Ab 105 Blib v. 2 No. 1
Community organization Aec 157
Congress of letters Blit 1

Conner, C. M.
Field experiences with wheat Ab 21
Field experiences with corn Ab 32
Conveyances Bl 5, 8
Connaway, J. W.
Actinomycosis in cattle Ab 186
Hog cholera Ab 174
Immunization of swine Ac 29
Infectious abortion in swine ab 187
Paralysis of hind quarter in swine Aec 86
Practical control of infectious abortion Ab 201
Stomach worms in sheep Aec 87
Texas fever Ab 37, Ab 48
Contagious diseases. Preventive Bm 3
Cooking
Cooking vegetables Aec 1
Cooking by electricity Ben 16
How to cook soybeans and cow peas Aec 45
Steam pressure cooking Aec 96
Cooperation
Among fruit growers Ab 97
Cooperative elevator assn' Aec 91
Cooperative marketing Aec 136
Corn
Cooperative variety tests Ab 87
Corn vs. oats for work mules Ab 114
Corn & soybeans Ab 220
Corn as stock food Ac 11
Corn silage Ab 150
Corn improvement Ab 59
Corn in Missouri Ab 183, Aec 123
Corn root rot Ac 117
Field experiments Ab 14 32
Hogging down corn Ab 224, Ac 152
How to test seed corn Aec 48
Life history Ab 9
Missouri corn growers Ac 19
Preparation of corn for fattening steers Ab 149
Selection and judging Ac 45
Selection for seed Ac 50, Aec 154
Study of Indian corn Br 1
Variety tests Ab 143
Corn borer Ac 94
Corn Clubs Aec 98
Cotton Ac 132, Aec 122
Cotton seed Ac 66
Coursault, J. H.
Circular of information Bed 12
Covenant Vivien S v. 1 No. 3
Cowpeas Ab 73, Ac 6
Seeding of cowpeas Ac 39, 53
Crayfish appendages S v. 2 No. 4

Craven, Lucile
Antony's oriental policy Sos v. 3, No. 2
Creamery
Directions for testing cream Ac 64
Farmers creamery Ac 18
Variations in cream tests Ac 37
Yellow color in cream Ac 74
Crops
Cost of crop production Ab 190
Crop rotation Ab 183
Crop rotation Abc 29
Crops for overflow lands Aec 24
Farm crops in S. W. Missouri Ab
Cummings, Edith Ba 25, 27
Curtis, W. C.
Experimental zoology Bs v. 1 No. 8
Dairying
Age of calving; growth of cows Ab 135
Dairy development Aec 103
Dairy calf club Aec 107
Dairy management Ab 26
Dairy husbandry Ab 56
Digestion trial with 2 Jersey cows Ar 4
Directions for testing milk Ac 41
Factors influencing growth of dairy heifers Ar 31
Farmers creamery Ac 18
Feeding the dairy cow Ac 26
Feeding the dairy cow Ab 58

Feeding for milk and production Ac 44
Keeping records of dairy cows Ac 57
Milk production costs Ab 156
Normal growth of dairy cattle Ar 36
Nutrients for milk production Ar 7
Per cent of far in cream Ab 94
Per cent of fat in milk Ab 100
Profits for milk cows Ab 159
Profitable dairy herds Aec 43
Selection of dairy bull Aec 51
Testing dairy cows Ac 96
Tin can separators Ab 68
Trials with 5 Jersey cows Ar 5
Dams
Soil saving dam Aec 14
Daniels, F. P.
Flora of Columbia, Mo. Ss v. 1 No 2
Flora of Boulder, Colorado Ss. v. 2 No. 2
Davidson, W. C.
Sanitation and sewage disposal Ben v. 1 No 3
Davis, Laurel E.
Missouri flour Ab 227
Debt to foreign heirs Bl 18
Demaree, F. H.
Concrete silo Ac 49
Wheat growing in Missouri Ac 43
Yield of oats Ac 46
Dickinson, Sherman
Visual Education Bed 18
Diseases
Fungous Ac 21, 23
Doane, D H.
Farm adviser in Missouri Ac 59
County farm adviser plan Ac. 60
Dobbs, Ella V.
Handwork in the grades 1 to 6 Bex No. 16
Dolley, D. H.
On resuscitation Bm 5
Doneghue, R. C.
Soils of Sullivan Co., Ab 92
Soils of Audrain Co., Ab 92
Douglass, T. R.
Experiments with farm crops Ab 123
Drainage investigations Ab 18
Drainage, tile Aec 34
Dress and dresses
Fitting Aec 109
Garment making club Aec 90
How to pad a form Aec 82
Making simple wash dresses Aec 57
Selection of textiles Aec 83
Sewing processes Aec 89
Drying fruit Aec 23
Duley, F. L.
Controlling surface erosion ab 211
Erosion Ab 63
Handling farm manures Ab 166
Handling barn yard manure Aec 62
Nutrients on maize plant Ar 42
Soil experiment Ab 148, 202, 203
Dunlap, F.
Growth of oaks in Ozarks Ar 41
Durant, A. J.,
White diarrhea in chickens Aec 85
Roup in fowls Ab 196
Eckles, C. H.
Birthrate of calves Ar 35
Carotin Ar 9, 10, 11, 12
Capacity of silos Ab 164
Causes of wide variation in milk production Ar 2
Dairy husbandry Ab 56
Dairy bull Aec 5
Dep't of dairy husbandry Ab 86
Digestion trials Ar 4
Effects of feeding cotton seed products Ar 27
Feeding the dairy cow Ac 26
Feeding for milk production Ac 44
Feeding the dairy cow Ab 58
Growth of dairy heifers Ar 31
Influence of fatness of cow Ab 100
Influence of plane of nutrition Ar 24, 25
Legumes Ab 162
Maintenance trials Ar 5
Nutrients for milk production Ar 7
Normal growth of dairy cattle Ar 36
Nutrients to develop bovine fetus Ar 26
Per cent of fat in cream Ab 94
Protein requirement of growing dairy heifers Ar 66
Raising calves with skim milk Ab 57
Raising calves on skim milk Ac 47
Ration and age of calving 135
Shock corn for silage Ac 71
Silo and its use Ab 133
Silo capacity Ac 89
Silo for Mo. farmers Ab 103
Silage investigation Ar 22
Variations in cream tests Ac 37
Winter rations for dairy heifers Ab 158
Edinger, A. T.
Relation of feed to protein Ar 73
Editorial page Bj No. 7
Education
Value to farmer Ac 77
Eggs
Egg production Ab 225
Saving summer eggs Aec 78
Winter eggs Aec 59
Electric power distribution Ben v. 4 No. 1
Elliff, J. D.
Study of rural schools Bed 11
Elwang, W. W.
Social function of religious belief Sos v. 2 No. 1
Ellwood, C. A.
Public relief etc.S v. 2 No. 2
Emberson, R. H.
Consolidation of schools of Missouri Bex 3
Exhibits for boys' and girls' clubs Aec 18
Organization of corn clubs Aec 98
Horse Br 3
Soil Br 2
Ten lessons in study of Indian corn Br 1
Emerson, F.
Geography of Missouri Bed 4

Eileithyia S v. 1 No. 4
Equitable relief against nuisances Bl 17
Equitable servitudes in Missouri Bl 16
Erosion Ab 211 Ar 63
Estates in Missouri Bl 1, 2

Etheridge, W. C.
Corn and soybeans Ab 220
Characters connected with yield Ar 46
Cotton production Aec 122
Fattening lambs on forage Aec 56
How to grow clover Aec 106
How to grow soybeans Aec 75
Loose smut in wheat Aec 108
Management of blue grass pastures Aec 66
N. E. Missouri crops Exp. field 1924 Ac 128
Productive methods for soybeans Ab 125
Way to grow soybeans Aec 20
Way to grow sudan grass Aec 21

Eyster, Wm. H.
Scarred endosperms Ar 52

Etz, W. F.
Raising calves Aec 81
Evans, A. R.
Variety tests of corn Ab 143
Cotton seed selection Ac 66
Evaporators Ac 14
Explosives Aec 158
Fairchild, A. H. R.
Teaching poetry in high school Bed 5
Farm adviser Ac 59
County farm adviser Ac 60
Farm animals
Parasites Aec 13
Farm Buildings Aec 38, 69
Farm lighting system Aec 39
Farm machinery Ab 4
Farming on a war basis Aec 31
Farm management
Cost and price tendencies Ac 97
Cost of producing wheat Ac 100
Influence of capital on farm organization Ab 175
Renting land Ab 167
Size of farm business Ab 140
Successful farm organization Ab 141
Farmers exchange Aec 27
Fats
How to save Aec 46
Favor, E. H.
Fungicides Ac 23
Feeds and feeding Ab 1, 2, 7, 8, 10 11, 14, 19, 27, 28
Feeds and feeding
Feeding wheat Ab 136
Molasses Ab 223
Feeding dairy cows Ac 115
Winter rations Ac 116
Rations for breeding ewes Ab 120
Winter's feed supply Aec 55
Fence posts Ac 51, Ac 108
Fenton, F. C.
Farm buildings Aec 38
Tile drainage Aec 34
Water systems for the farm Aec 49
Ferguson, J. A.
Fence posts Ac 51
Growing a woodlot from seed Ac 52
Fertilization Abc 30
Fertilizers
Commercial fertilizers Ab 63
Commercial analyses Ab 66, 70
Commercial inspection Ab 77, 78, 80, 82, 85, 91, 99, 108
Fertilizer for wheat Aec 28
Handling barnyard manure Ab 166
Howto choose Aec 133
Manures and fertilizers Ab 34
Mo. fertilizer law Ac 58
Profitable tomato fertilizers Ab 169
Testing fertilizers Ab 178, 192, 209, 230.
Fessenden, E. A.
Heat transmission Ben 18
Fishes, Devonian Bs v. 2 No. 4
Fizzell, R. B.
Payment of debt for foreign representatives Bl 18
Flies Bex No. 11
House fly Aec 16
Flora of Columbia, Mo. Ss v. 1 No. 2
Flora of Boulder, Colo. Ss. v. 2 No. 2
Flowers, Alan
Friction and lubrication Ben v. 2, No. 2
Floyd, B. F.
Fungous diseases Ac 21
Fodder Ab 7, 8
Food, preservation Bex No. 6
Forage crops Aec 119, 120, 121
Fattening lambs on forage Aec 56
Forbes, E. B.
Grain rations Ab 65, 67
Forestry
Forest conditions in the Ozarks Ab 89
Growing a woodlot from seed Ac 57
Fox, Chas.
Sugar beets Ab 17
Fox, H. D.
Limited use of shelled corn Ab 218
Frame, B. H.
Cost of crop production Ab 190
Cost and income of farm poultry flock Ab 219
Cost of production on corn Aec 155
Frear, D. W.
Essentials of wheat production Aec 149
Fruit
Fruit bud formation Ar 47
Grafting trees Ab 233
Picking Ac 113
Small fruit Ab 184
Winter injury Ac 107
Gager, C. S
Botany Bs v. 1 No. 7
Garlock, H. M.
Fattening calves Aec 156
Garden
Farm garden Aec 7

Vegetable Ac 83
Time of planting vegetables Aec 21
Gardner, J. S.
Farm garden Aec 7
Gardner, V. R.
Bud selection Ar 39
Nutrition of strawberries Ar 57
Pruning the apple Ac 90
Geology Bs 6
Geology, see Missouri geology
Germination of seeds Ab 6
Ginsburg, Claire E.
Newspaper man's library Bj 22
Ginseng
Diseases Ab 69
Glanders Abc 16, 33
Good roads
Better highways Bex 22
Country roads Aec 68 Bex 15
Good roads Abc 13
Roads Ben 17
Gooseberries Ab 232
Gopher Aec 146
Gould fund grant Ba 8
Grain
Judging Aec 58, 104
Grammar based on mistakes Bed 9
Grantham, A. E.
Cowpeas Ab 73
Grapes, Ab 46
Culture Ab 22
Harvesting Aec 160
Grasses Abc 9, 35, 130, Ab 2 109
Graves, W. W.
Certiorari, Bl 24
Green, R. M.
Cost and price tendencies Ac 97
How to keep farm accounts Ac 84
Milk production costs Ab 156
Renting land Ab 167
Griffith, Ira A.
Technical manual arts Bex 14
Guerrant, N. B.
Adequacy of synthetic rations Ar 81
Gumaer, P. W.
Economics of electric cooking Ben 16
Hackedorn, H.
Docking and castrating lambs Ac 61
Fattening lambs on forage Aec 46
Rations for breeding ewes Ab 120
Rye and blue grass pastures Ac 73
Use of pure bred ram Ac 65
Hackleman, J. C.
Crops for overflowed lands Aec 24
Factors in wheat production Ac 56
Handling the alfalfa crop Aec 60
How to test seed corn Aec 48
Hadley, H. S.
Legal Education Bl. 29
Haigh, L. D,
Composition of beef animals Ar 30
Testing fertilizers Ab 192, 209, 230
Studies in Animal Nutrition Ar 43, 54, 55, 59
Composition of bovine at birth Ar 38
Effects of limited food on growth Ar 28
Inspection of commercial fertilizers Ab 160, 168
Hamilton, C. C.
Prevent insect damage Aec 54
Hamilton, T. E.
Chanson de Willame Sl v. 2
Handwork in grades Bex 16
Haney, J. W.
Heat transmission Ben 18
Harmon, E. M.
Dairy calf c ub Aec 107
Mo. cow testing Aec 130
Harmon, K. G.
Seed corn Aec 154
Harper, R E.
Local and special legislation Bl 19, 20
Haseman, L.
Bagworms Ac 92
Chinch bug Ac 62
Control of insect pests Ac 63
Controlling the chinch bug Aec 4
Control of San Jose scale Ab 133
Evergreen bagworm Ab 104
European corn borer Ac 94
Federal and state laws nursery stock Ac 99
Hessian fly Aec 80
House fly Aec 16
Insect pests of field crops Ab 170
Insect pests Aec 134
Nursery and orchard insect pests Ab 176
San Jose scale in Missouri Ab 98
San Jose scale Ac 109
Summer chinch bug control Aec 129
Winter chinch bug control Aec 116
Tarnished plant bug Ar 29
Hays, W. P.
Testing milk and cream Ac 119
Headache Bm 11
Hearsay and relevancy in Mo. Bl 15
Heat transmission Ben 18
Hedrick, E. R.
Mathematics Bs v. 1 No. 2
Helm, C. A.
Corn in Missouri Ab 181, 184
Corn and soybeans Ab 220
Growing orchard grass Ac 130
Growing grape for forage Aec 119
Growing wheat in Missouri Aec 29
Meadows and pasture management Ab 234
Productive methods for oats Ac 105
Productive methods for wheat 188
Sweet clover Aec 36

Henderson E. W.
Fattening farm poultry Ac 138
Hensley, H. C.
Sunflower seed Aec 140
Fruit marketing Aec 168
Non-profit cooperative marketing act Aec 169
Hervey, G. W.
Meat scraps Ab 155
Hessian fly Ab 62 Ac 70 Aec 80

Heyle, Essie M.
Milk for growth Aec 118
Meal planning Aec 97
Modern rural home in Missouri Aec 95
Pickling fruits and vegetables Aec 88, Aec 114
Selected apple recpies Aec 93
Use of vegetables Aec 115
Hildebrand, L. E.
Economics of rural distribution of electric power Ben v. 4 No. 1
Hinton, E. W.
Some problems in hearsay and relevancy Bl 15
Hog cholera Ab 174 Aec 17
Hogan, A. G.
Influence of plane of nutrition Ar 51
Relation of feed to protein Ar 73
Adequacy of synthetic rations Ar 81
Hogging corn Aec 37
Hogs
Brood sow Aec 100
Butchering Aec 42
Effect of rations in development Ab 81
Fattening hogs Ab 67
Feeding wheat Ab 136
Feeding Abc 1, 2, 8, 9, 10
Forage crops for swine Ac 55
Forage crop rotation for hogs Ab 110
Grain rations Ab 65
Green forage Ab 79
Immunization of swine Ac 29
Infectious abortion Ab 187
Paralysis of hind quarter Aec 86
Pork production with forage crops Ab 95
Raising pigs Aec 77
Self feeders Ab 144
Swine feeding Ac 28
Hollister, H. A.
Scale insects of Mo. Ar 58
Home makers club Aec 19
Homes
Modern rural home Aec 95
Hooker, H. D.
Apple spurs Ar 40
Annual & biennial bearing in York apples Ar 75
Changes produced in apple trees by pruning Ar 75
Estimation of pectin Ar 77
Fruit bud formation Ar 47
Peach culture in Missouri Ab 207
Responses of apple trees Ar 50
Horses
Feeding and care of horses Ac 27
The horse Br 3
Hot beds and cold frames Ac 33
Howard, W. L.
Hot beds and cold frames Ac 33
Plant propagation Ac 13
Protecting orchard against frost Ac 35
Rest period in plants Ar 1, 15, 16, 17, 21
Howells, Owen
Rural population groups Ar 74
Hummel, B. H.
Community organization Aec 157
Hudelson, R. R.
Crop rotation for Mo. soils Ab 183
Fertilizer for wheat Aec 28
Keeping soils productive Ac 102
Soil experiments Ab 126-130
Soil investigation Ab 119
Hudson, J. W.
Treatment of personality Sp No. 1
Hudson, Manley O.
Conditions subsequent in conveyances Bl 5
Estates tail Bl 1
Estates by marital right Bl 2
Executory limitations of property Bl 11
Land tenure and conveyance Bl 8
Limitations of personal property Bl 4
Preliminary stock subscriptions Bl 9
Proposed regulation of Missouri procedure Bl 13
Rule against perpetuities Bl 3
Transfer and partition of remainders Bl 14
Hutchison, C. B.
Cooperative experiments Ac 54
Cooperative exp. with alfalfa Ab 106
Drainage investigation Ab 118
Exp. with farm crops Ab 123
Grass investigation Ab 108
Growing rape for forage Aec 3
Hairy letch Aec 2
Seeding of meadows Ac 68
Selection of corn for seed Ac 50
Soil experiments Ab 83, 84, 86, 127, 128-130
Variety tests of corn Ab 143
Ice Cream Ar 69, 70, 71
Insect Pests
Field crops Ab 134
Insect pests Ab 170 Aec 134
Injurious insect pests Ab 215
Nursery and orchard insect pests Ab 176
Scale insects Ar 58
Tarnished plant bug Ar 29
Insecticides Ac 23
Insects
Control of garden and truck crop Aec 15
Peach tree borers Ac 112
Prevent insect damage Aec 54
Ithaca S. v. 2 No. 1

James, E. R.
Some aspects of status of children in Mo. Bl 10
Jenson, Anna C.
Feeding the baby Aec 73
Steam pressure cooking Aec 96
Johnson, O. R.
Cost of production on Missouri farms Ab 125
Cost of horse labor Ab 152
Cost of producing farm crops Ab 165
Cost of producing wheat Ac 110
Distribution of farm labor Ar 6
Farming on a war basis Aec 31
Influence of capital on farm organ. Ab 175
Cost of family living on the farm Ab 213

Cost and income of farm poultry flock Ab 219
Increasing farmer's income Aec 13
Land tenure Ab 121
Profits from milk cows Ab 159
Renting land Ab 167
Size of farm business Ab 140
Successful farm organization Ab 142
Valuation education to the farmer Ac 77
Work of farmers' exchange Aec 27
Jones, Abner
Study of rural schools Bed 11
Jones, M. M.
Productive feeding of silage Ab 226
Draft of farm wagons Ab 237
Journalism
Beginning of modern journalism Bj 39
Deskbook 1915 Bj 12
Deskbook 1916 Bj 19
Deskbook 1920 Bj 21
Deskbook Ed. 8, 1925 Bj 33
Journalism week in print 1912 Bj 2
Journalism week in print 1913 Bj 5
Journalism week in print 1914 Bj 6
Journalism week in print 1915 Bj 11
Journalism week in print 1918 Bj 17
Journalism week in print 1923 Bj 28
Journalism week in print 1924 Bj 29-30
Journalism week in print 1925 Bj 35-36
Journalism of China Bj 26
Journalism of Japan Bj 16
Journalism for teachers Bed 3
Missouri alumni journalism Bj 27
Special phases Bj 25
World's journalism Bj 9
Journalistic ethics Bj 32
Journalists' library Bj 13
Recent books Bj 37
Junior college Bed 12

Kane, C. E.
Journalists' library Bj 13
Keffer, Chas.
Grape culture Ab 23
Seedling strawberries Ab 22
Spraying apple trees Ab 27
Strawberries Ab 18
Kellogg, E. W.
Use of metal conductors Ben v. 3 No. 1
Kempster, H. L.
Adequacy of synthetic rations Ar 81
Farmers' poultry house Ac 75
Farm poultry house construction Ab 107
Feeding baby chicks Ac 91 Ac 133
Feeding for egg production Ac 76 Ac 111
Influence of annual proteins Ab 225
Judging of chickens Aec 8
Meat scraps Ab 155
Missouri colony brooder house Ac 110
Missouri poultry house Ac 81 Ac 129
Protein feeds Ac 82
Sex maturity and egg production Ar 78
Sour milk for chicken feeding Ac 79
Story of a backyard flock Aec 26
Kiess, C. C. Ba 22, 23
King, B. M.
Cotton Exp. fields Ac 132
Kirkpatrick, R. T.
Organization of corn clubs Aec 98
Klinger, Mary L.
Related science Bed 14
Kitchens
Farm kitchens Aec 12
Kneeland, Hildegard
Feeding of children Bex No. 23
Krusekopf, H. H.
Agricultural lime Ab 146, 171
Brown loess soils Ac 235
Missouri soil survey Ac 104
Soils of Missouri Ab 153
Kunkel, O. L.
Rural school consolidation Bed 2
Labor
Cost of horse labor Ab 152
Distribution of farm labor Ar 6
La Rue, H. A.
Earth roads and oiling of roads Ben 17
Grading earth roads Ben 24
Land
Land tenure Ab 121 Bl 8
Renting land Ab 167
Lawns Ac 136
Leaf crumpler Ab 36
Leaf roller Ab 54
Fruit tree Ab 71
Lefevre, Geo.
Evolutional zoology Bs v. 1 No. 9
Legislation, local & special Bl 19, 20
Legumes Ab162
Lehmann, E. W.
Farm lighting systems Aec 39
Magnum terrace Ac 98
Tile drainage Aec 34
Lehmann, F. W.
Law and the newspaper Bj 15
Librarian's annual report 1907 Blib 1
Library building, opening exercises Blib 8
Library primer Blib 7
Library organization for high schools Bed 13
Lighting rods Ben v. 3 No. 1
Lime Ab 146
Agricultural line Ab 171
Liming materials Aec 113, 153
Linens
How to select and store Aec 44
Live stock
Community live stock breeding Aec 33
Purebred live stock Aec 63
Loan office Bos 1
Lockwood, Sara
Women and the newspaper Bj 30
Missouri alumni in journalism Bj 34
Lodeman, E. G.
Spray calendar Ab 30
Long, C. M.
Community dairy development Aec 103
Loomis, Ralph
Cooperative elevator assn' Aec 91
Cooperative live stock shipping Ab 198

Lovejoy, A. O.
Unity of science Bs v. 1 No. 1
Lump Law Ag 186
Lunches
Cold school lunch Aec 10
McAdams, A. J.
Handling explosives Aec 158
McBaine, J. P.
Extraordinary writ Bl 30-32
Writ of certiorari Bl 6, 13
McBride, O. C.
Injurious insect pests of strawberries Ab 215
Peach tree borers Ac 112
McCaustland, E. J.
Better highways Bex 22
Country road Aec 68
Water supply and sewage disposal Ben 21
McCoy, A. W.
Artesian waters of Missouri Ben v. 4 No. 3
McCulloch, A. J.
Loan office experiment Bos 1
McDaniel, J. S.
Control of hog cholera Aec 17
McDonald, May L.
Preservation of food Bex 6
McGill, Caroline
Spermatogenesis of Anax Junius Sv. 2 No. 5
McNatt, H. E.
Directions for testing milk Ac 41
Plastered or Guerlo silo Ac 48
McVey, K. A.
Water supply Ben v. 1 No. 2
Major, H. F.
Lawns Ac 136
Pruning shade trees Ac 81
Malaria Bm 10
Mangold, Geo. B.
Children born out of wedlock Sos v. 3 No. 3
Manly, W. G.
Ithaca S v. 2 No. 1
Mann, L. B.
Raising calves Aec 81
Mann, Robert
Deskbook Bj 19, 21
Editorial page Bj 7
Manual arts Bex 14
Marbut, C. F.
Geology, Bs v. 1 No. 6
Lowlands of Missouri S v. 1 No. 2
Soils of Ozark region Ar 3
Marketing
Wool marketing Aec 76
Marks, B. J.
Recent books Bj 37
Martin, F. A.
Early diagnosis and treatment of cancer Bm 9
Martin F. L.
Journalism of Japan Bj 16
Journalism for teachers Bed 3
Marx, C. W.
Missouri coals Ben v. 2 No. 1
Mathematics Bs 2
Meadows
Meadow management Ab 234
Seeding Ac 68
Meal planning Aec 97

Meckle, F. A.
Farm buildings Aec 69
Sewage disposal for farm homes Aec 71
Melon pest Aec 110
Methods of determining time Ba 5
Meyer, Max
Kind of scholarship records Bed 8
Mechanics of the inner ear Ss v. 2 No. 1
Psychol. theory of music S v. 1 No. 3
Mildews
Powdery mildews Ar 23, Ar 37
Milk
Carotin Ar 9-12
Factors affecting Ab 222
Influence of plane of nutrition Ar 24, 25
Lactochrome Ar 13
Milk for growth Aec 118
Milk production costs Ab 156
Preservation of milk Ar 34
Testing Ac 119
Variation in milk production Ar 2
Miller, Edith
Course in grammar Bed 9
Miller, M. F.
Agricultural lime Ab 146, 171
Alfalfa growing Ab 72
Cooperative variety tests of corn Ab 87
Cooperative exp. with alfalfa Ab 106
Cooperative exp. in agronomy Ac 36
Cooperative experiments Ac 54
Control of soil washing Ac 78
Drainage investigation Ab 118
Effect of varying moisture Ar 76
Erosion Ar 63
Factors in wheat production Ac 56
Fertility of soils Ac 69
Fertilizer trials Ab 157
Grass investigation in Ozarks Ab 108
How to choose corn fertilizers Aec 133
How to grow clover Aec 106
Maintaining soil fertility Ac 38
Nutrients on maize plants Ar 42
Seeding of clovers Ac 42
Soil experiments Ab 202, 203
Soil exp. on upland loam Ab 83
Soil exp. on prairie silt loam Ab 84
Soil experiment on rolling limestone Ab 86
Soil improvement Aec 132
Soil management in Ozark region Ab 88
Soil investigations Jasper Co., Ab 119
Soil experiments, level prairies Ab 126
Soil experiments, dark prairies Ab 127
Soil experiments, glacial lands Ab 128
Soil experiments, red limestone Ab 129
Soil experiments, gray prairie Ab 130
Soil experiments on Ozark uplift Ab 148
Soils of Mo. Ab 153
Suggestions for Mo. corn growers Ac 19
Ten lessons on the study of Indian corn Br 1
Testing cow peas Ac 53

Thirty years Exp. crop rotation Ab 182
Millinery Aec 171
Missouri corn growers Ac 19
Missouri geography Bed 4
Missouri geology S. V. 1 No. 3
Ss v. 3 No. 1
Ben No. 19
Missouri housekeeper's conference assn. Ac 30
Missouri granites Ben 14
Missouri procedure by rules of court Bl 13
Missouri stone and gravel Ben v. 2 No. 3
Missouri University serial publications Blib 6, 9
Mitchell, O. W. H.
Bacteria and disease Bm 1
Prevention of tuberculosis Bm 6
Water prevention of pollution Bm 7
Monroe doctrine Bos 2
Morgan, E. L.
Rural population groups Ar 74
Moore, H. B.
Illustrations in advertising Bj 31
Morlin, G.
An odious comparison Blit 2
Morse, True D.
Marketing cooperative livestock shipments Aec 136
Prorating expenses Aec 161
Stockyard equipment Aec 159
Moulton, C. R.
Composition of beef animals Ar 30
Composition of bovine at birth At 38
Studies in animal nutrition Ar 43, 54, 55, 59, 61
Mulching Abc 4
Muns, W. E.
Headache Bm 11
Mumford, F. B.
Breeding experiments with sheep Ab 53
Commercial fertilizers Ab 63
Contributions to knowledge in Agr. Ab 210
Factors in beef production Ac 12
Farm adviser Ac 59
Fattening cattle on blue grass pasture Ab 90
Forage crop rotation Ab 116
Missouri fertilizer law Ac 58
Missouri fertilizer law Ac 114
New knowledge Ab 197, 228
One year's work 1921 Ab 189
Plant propagation Ac 15
Pork production with forage crops Ab 95
Rational sheep feeding Ac 25
Rations for fattening western yearling sheep Ab 115
Some new developments in Agr. Science Ab 236
What Agr. Exp. Station is doing for Mo. Ab 179
Music S v. 1 No. 3
Neale, M. G.
School building program for Columbia Bed 15
School building program for Joplin Bed 16
Nelson, J. B.
Normal immunity reactions of the cow Ar 68
Neuman, L. N.
Effect of heat on Mo. granite Ben 14
Newman, H. G.
Infectious abortion in swine Ab 187
Newspapers
Building a circulation Bj 6
Missouri laws Bj 1
Missouri Intelligencer Bj 18
News and newspapers Bj 28
Newspaper efficiency Bj 10
Law and the newspaper Bj 15
Picture plates Bj 23
Small town newspaper Bj 20
Newton, Guy D.
Energy necessary to shear steel Ben 20
Noyes, Guy L.
Relation of sight and hearing to early school life Bm 5
Nursery stock
Federal and state laws Ac 99
Nutrition Ar 24, 25, 26, 54, 55, 59, 61
Oaks Ar 44
Oats
Factors influencing the yield Ac 46
Fulghum oats Ab 229
Productive methods Ac 105
Growth of oats Ar 41
Test of varieties Ab 15
Observations of comets Ba 2
Observation of comets A Ba 3
Observation of comets B Ba 1
Observations of comets E Ba 4
Ohio shales Bs v. 2 No. 2
Oil emulsions Ab 205
Oil and greases Ben v. 2 No. 2
v. 4 No. 2
v. 4 No. 4
Orchards
Feeding the orchard Ac 22
Planting a backyard orchard Aec 65
Protection against frost Ac 35

Olmstead, A. T.
Assyrian historiography Sos v. 3 No. 1
Ozarks
Forest conditions Ab 89
Grass investigation Ab 109
Soil management Ab 88

Page E. M.
Demonstration work with potatoes Aec 138
Increasing potato yields Aec 163
Palmer, L. S.
Carotin Ar 9, 10, 11, 12
Effects of feeding cotton seed products Ar 27
Influence of plane of nutrition Ar 24, 25
Lactochrome Ar 13
Preservation of milk Ar 34
Pancoast, Carrie L.
Farm kitchen Aec 12
Pickles and relishes Aec 35
Paquin, P.
Black leg Ab 12
Texas fever Ab 11, Abc 31

Contagious pleuro-pneumonia Abc 15
Glanders Abc 16, 33
Parks, J. L.
Contracts for the benefit of third persons Bl 33
Declaration of trusts Bl 27
Transfer of property Bl 23
Domicile of a married woman Bl 29
Ultra vires trans Bl 25-26
Pastures
Bluegrass Ac 73
Management of bluegrass pastures Aec 66
Seeding Ac 68
Patterson, Don M.
Journalism of China Bj. 26
Peach trees
Covering to protect buds Ab 16
Hardiness of peach buds Ac 31
Peach growing in Missouri Ab 38
Peach yellows Ac 4
Peach culture Ab 207
Pruning trees Ab 55 Ar 72
Winter killing of peach buds Ab 74
Winter protection Ab 38
Pears
Blight Ab 16
Pectin Ar 77
Periodicals in library Blib 1, 2
Perpetuities in Missouri Bl 3
Photo engraving Bj 14
Photometric investigation Ba 7, 13, 20, 22, 23, 24
Philanthropy S v. 2 No. 2
Physics Bs 3
Pickles
Pickles and relishes Aec 35
Pickling fruits and vegetables Aec 88, 114
Plants
Killing of plant tissue Ar 8
Rest period Ar. 1, 15, 16, 17, 21
Sap studies Ar 14
Plant propagation Ac 13, 14
Plays Bex 36,42
Plows and plowing Abc 32
Poetry in high school Bed 4
Pope, Jesse E.
Clothing industry of N. Y. Sos v. 1
Potatoes
Growing late potatoes Ac 95
Potatoes Ab 16, 12 Aec 138
Potato culture Aec 64
Potato growing Ab 33 Aec 163
Seed potatoes Ac 106
Seed studies Ab 191
Spraying Ab 198
Sweet potato culture in Missouri Ac 103
Potter, Peter
Topography of thorax Ss v. 1 No. 1
Poultry
Cost of farm poultry flock Ab 219
Egg production Ac 111
Farm poultry house Ab 107
Fattening Ac 138
Feeding baby chicks Ac 91, 133
Flock improvement Aec 105, 112
How to breed good layers Aec 72
How to cull farm hens Aec 70, 111
Judging chickens Aec 74, Ac 110
Meat scraps and sour milk Ab 155
Missouri colony brooder house Aec 74, Ac 110 Aec 145
Poultry equipment Aec 151
Poultry house Ac 76, 80, 93, Aec 101
Profits from farm poultry Aec 84
Protein feeds for laying hens Ac 82
Roup Ab 196
Saving summer eggs Aec 78
Sour milk for chicken feeding Ac 79
Story of a barnyard flock Aec 26
White diarrhea Aec 85
Winter eggs Aec 59
Pound, C. W.
Law school curriculum curriculum Bl 27
Powell, J. B.
Building a circulation Bj 6
Newspaper efficiency Bj 10
Preventive medicine Bm 8
Production
Cost Ab 125
Property
Executory limitations Bl 11
Personal Bl 4
Real Bl 4
Publisher
Writer and publisher Bj 27
Pyle, W. H.
Abnormal and defective children Bex 9
Manual of mental and physical exams Bex 21, 29
Quinn, J. T.
Tomato culture Ab 212
Radium Ben 23
Ragsdale, A. C.
Change of farm Ar 67
Comparison of Holstein Friesian sires Ab 217
Comparison of Jersey sires Ab 217
Dairy bull Ac 127
Feeding dairy cows Ar 115
Official testing of dairy cows
Profitable dairy herds through cow testing Aec 43
Protein requirements Ar 66
Relation between age ab 221
Skeletal growth of dairy cow Ar 80
Why build a silo Ab 214
Winter rations Ac 116
Rape
Growing rape Aec 3
Raspberries Ab 231
Ravenel, M. P.
House fly Bex 11
Preventive medicine Bm 8
Reavis, G. W.
Grain judging for boys' and girls' clubs Aec 58
Record, S. J.
Forest conditions of the Ozarks Ab 89
Reed, Geo. M.
Powdery mildews Ar 23

Resistance of oats to mildew Ar 37
Reid, W. H. E.
Percentages of butter fat Ar 70
Manufacture of ice cream Ar 69, 71
Ritchie, W. S.
Animal nutrition Ar 59
Robins, W. J.
Growth of oaks Ar 44
Rosa, J. T. Jr.
Better methods of potato culture Ab 194
Controlling soil moisture Ab 204
Growing late potatoes Ac 95
Growing tomatoes Ac 87
Hardening process in vegetable plants Ar 48
Home vegetable garden Ab 193
Potato culture Aec 64
Profitable tomato fertilizers Ab 169
Seed potatoes Ac 106
Seed studies Ab 191
Spraying Irish potatoes Ab 198
Storing vegetables Aec 53
Sweet potato culture Ac 103
Ross, C. G.
Deskbook Bj 12
News in the country paper Bj 4
Ross, P. H.
Emergency agricultural agent Aec 40
Root, Addie
Canning by cold pack method Aec 9, 52
Drying fruits and vegetables Aec 23
Garment making club Aec 91
Making light bread Aec 11
Making simple wash dresses Aec 57
Rural schools Bed 11
Rural population Ar 74
Rural school consolidation Bed 2
Sanborn, J W.
Corn Fodder as stock food Abc 11
Corn harvesting Abc 22
Feeding for lean meat Abc 14, 19
Feeding ensilage Ab 8
Feeding hogs Abc 1
Feeding for flesh Abc 27
Feeding steers Abc 2
Feeding wheat and corn Abc 7
Fertilization Abc 30
Good roads Abc 13
Grasses for pasture Abc 35, Ab 2
Grass-fed pigs Abc 9
List of tillage implements Ab 4
Green vs. dry storage fodder Ab 7
Maintenance ration for pigs Abc 28
Meal feeding Abc 8
Mulching Abc 4
Pig feeding experiments Abc 28
Plows nad plowing Abc 32
Rotation of crops Abc 29
Relation of tillage to soil moisture Abc 5
Seed potatoes Abc 12
Test of varieties of wheat Abc 3
Sanctuary in England S v. 1 No. 5
San Jose scale Ab 41, 98, Ac 3
Control Ab 132, 161
Sanitation Ben v. 1 No. 3
Saupe, Wm. J.
Classification of pupils Bed 19
Schowengerdt, P. F.
Liming material Aec 113, 153
Liming Missouri soils Aec 131
Schweitzer, P.
Analysis of commercial fertilizers Ab 66.
Breeds of beef cattle Ab 24
Composition of flesh of cattle Ab 25
Feeding tests Ab 28
Feeding wheat to pigs Ab 29
Life history of corn Ab 9
Missouri coals Ben v 2 No. 1
Soils, weather, field trials winter corn Ab 5
Soils and fertilizers Ab 19, 20
School building program
Columbia Bed 15
Joplin Bed 16
Schools consolidation Bex No. 3
School improvement agencies Bex 1
Scholarship records Bed 8
Scott, J. N.
Congress of letters Blit 1
Scott, I. T.
Tomato wilt Ar 65
Science unity Bs 1
Sears, F. H. Ba
Sears, K. C.
Larceny of referendum Petitions Bed 21-2
Selbert, Mrs. L.
Colds Aec 79
Self feeders Ac 118
Severance, H. O.
Care of free text books Bex 7
Checklist of official serial pubs. Blib 6, 9, 10, 12
Handbook of the libraries Blib 3
Library primer Blib 7
List of periodicals currently received Blib 2, 11
Opening exercises new library building Blib 8
Partial bibliography and index to agricultural pubs. Blib 5
Standard library organization Bed 13
Sensintaffar, Lillian
Related science Bed 14
Sewage disposal Ben v 1 No. 3 Aec 71
Sewing
Principles Aec 41
Sharp, H. N.
Firing tests of Missouri coal Ben v. 3 No. 2
Shearing steel Ben 20
Sheep
Advantages of pure bred ram Ac 65
Breeding Ab 53
Docking and castrating lambs Ac 61
Keep sheep for profit Aec 67
Rational sheep feeding Ac 25
Rations for breeding ewes Ab 120
Stomach worms Aec 87
Shrader, H. L
Missouri colony brooder house Aec 145
Culling farm flocks Aec 170

Silage
Corn silage Ab 112
For horses and mules Ac 72
Production Ab 226
Silage Ab 8 Ar 22, Ar 65
Silos and silage Aec 32
Silos Ab 103
Capacity Ab 164
Estimating silo capacity Ac 89
Filling the silo Aec 5
How to build a Guerlo Silo Ac 67
Plastered or Guerlo silo Ac 48
Reinforced concrete silo Ac 49
Silo, its use Ab 133
Silos and silage Aec 32
Why build a silo Ab 214
Simonton, J. W.
Statutory covenants Bl 28
Judicial control of Mo. Pub Service Comm Bl. 30, 31
Silverman, L. L.
Definition of sum of divergent series Sm 1
Simpson, S. T.
Community live stock breding Aec 33
Silos and silage Aec 32
Winter feed supply Aec 55
Smith, Herbert W.
Making the printed picture Bj 14
Picture plates Bj 23
Social survey Bos 3
Soils
Brown loess soils Ab 235
Control of soil washing Ac 78
Controlling soil moisture Ab 204
Fertility Ac 69
Keeping soil productive Ac 102
Maintaining soil fertility Ac 38
Missouri soil survey Ac 104
Soil inoculation for legumes Ac 86
Soil investigations Ab 119, 126, 127, 128, 129, 130, 148, 153
Soil Br 2
Soils of the Ozark region Ar 3
Soils and fertilizers Ab 19, 20
Soil experiments Ab 202, 203
Soil experiments on upland loam Ab 84
Soil experiments on prairie silt loam Ab 84
Soil experiments on rolling limestone Ab 86
Soil improvement Aec 132
Soil management in Ozarks Ab 88
Soil of Sullivan Co., Ab 92
Soil of Audrain Co. Ab 93
Soule, A. M.
Dairy management Ab 26
Soybeans
Productive methods Ab 195
Way to grow Aec 20, 75
Spalding, F. P.
Country roads Bex 15
Spence, E. L.
Prevention of malaria Bm 10
Spencer, D. A.
Cooperative wool marketing Aec 76
Keep sheep for profit Aec 67
Spraying Aec 125, 127, 142-4, 147, 164, 165, 166
Apple trees Ab 27
Cattle Ab 3
Codling moth Ab 13 Aec 128, 150
Cooperative spraying demonstration Aec 92
Instruction for spraying Ac 34 Aec 96
Orchards and vineyards Ab 31 Aec 141, 166
Spray calendar Ag 30, Ac 70
Spraying Missouri fruits Ab 216
Spray nozzles Ab 50
Stadler, L. J.
Corn in Missouri Ab 181
Productive methods for wheat Ab 188
Productive feeding of silage Ab 226
Fulghum oats Ab 229
Productive method for oats Ac 105
Field plot technic Ar 49
Corn in Missouri Aec 123
Stanley, Louise
Cooking of vegetables Aec 1
Feeding the baby Bex 24
Preservation of food Bex 6
Stebbins, Mary E.
Family medicine chest Aec 148
Stedman, J. M.
Chinch bug Ab 51
Fruit tree leaf roller Ab 71
Fruit treebark beetle Ab 44
Frinzed wing apple bud moth Ab 42
Hessian fly in Missouri Ab 62
Lesser apple leaf folder Ab 36
San Jose scale Ab 41
"Sting" in the apple Ab 64
Tarnished plant bug Ab 46
Strawberry falseworm Ab 54
Wooly-aphis Ab 35, Ac 7
Steele, Mary I.
Regeneration of cray fish S v. 2 No. 4
Stephens, F. F.
The Monroe doctrine Bos 2
Transitional period Sos v. 2 No. 4
Stewart, Caroline T.
Werewolf superstition Sos v. 2 No. 3
Stewart, O. M.
Physics Bs v. 1 No. 3
Stock subscription agreements Bl 9
Stone from St. Pauls Bj 40
Strawberries Ab 17, Aec 137
Commercial fertilizers Ab 113
Culture Ac 123
False worm Ab 54
Seedling Ab 22
Tests Ab 16
Nutrition Ar 57
Sub-soiling Abc 17
Sudan grass
Way to grow Aec 22
Sugar how to save Aec 47
Sugar beets Ab 17, 40, 45, Ac 5
Sullivan, K. C.
Dipping and fumigating nursery stock Ab 177
Pickle worm Ac 122
Plant inspection in Missouri Ac 101

San Jose scale Ar 109
Swartwout, H. G.
Small fruit growing 184
Grape growing in Missouri Ab 208
Blackberry and raspberry culture Ab 231
Gooseberries and currants Ab 232
Swett, W. W.
Factors influencing growth Ar 31
Protein requirement for growing dairy heifers Ar 66
Raising calves Ac 88
Talbert, T. J.
Apple blotch Ac 124
Cedar rust of apples Ac 135
Control of important garden insects Aec 15
Cooperative spraying demonstration Aec 92
Fire blight of apples Ac 137
Grafting Ab 233
Picking fruit Ac 113
Prunning apple trees Ac 120
Spray in apple orchards Ab 161
Spraying Missouri fruits Ab 216
Strawberry culture Ac. 123
Tarr, W. A.
Barite deposits of Missouri Ss v. 3 No. 1
Effects of heat on Missouri granites Ben 14
Taylor, C. C.
Social survey Bos 3
Ashland community summary Ab 173
Texas fever Ab 11, 37, 48 Abc 31
Text Books Bex 7
Thilly, Frank
Process of inductive inference S v. 2 No. 3
Tillman, B. W.
Liming for clover Aec 61
Timothy plant Ar 19, 20
Tomato for the cannery Ac 87
Tomato culture Ab 212
Tomato production Ab 194
Tomato wilt Ar 64
Topography of thorax Ss v. 1 No. 1
Tort liability Bl 7, 12
Townsley, T. S.
How to breed good layers Aec 72
How to cull farm hens Aec 70, 111
Missouri colony breeder house Aec 74
Mo. plan of flock improvement Aec 105, 112
Profits for farm poultry flocks Aec 84
Saving summer eggs Aec 78
Winter eggs Aec 59
Tracy, S. M.
Plants and their uses Abc 21
Transplanting Ar 33
Treatment of personality Sp 1
Trees
Pruning shade trees Ac 81
Trees for the lawn Ac 17
Tree borers Ab 44
Trenholme, N. M.
Right of sanctuary S v. 1 No. 5
Trowbridge, E. A.
Corn versus oats Ac 126
Corn vs. oats for work mules Ab 114
Feeding and care of horses Ac 27
Limited use of shelled corn Ab 218
Purebred livestock Aec 63
Rations for fattening sheep Ab 115
Relation of feed to protein Ar 73
Silage for horses and mules Ac 72
Use of molasses Ab 223
Why build a silo Ab 214
Trowbridge, P. F.
Composition of beef animals Ar 30
Effect of limited food on growth Ar 28
Farmers beef club Ac 85
Hog butchering and pork curing Aec 42
Inspection of commercial fertilizers Ab 78, 80, 82, 85, 91, 99, 109, 116, 122, 139, 145 154, 160
Maintenance requirement of cattle Ar 18
Studies in animal nutrition Ar 43, 54, 55, 59, 61
Studies of timothy plant Ar 20
Tuberculosis prevention Bm 6
Tucker, Geo. M.
Corn improvement for Missouri Ab 59
Turner, C. W
Comparison of Jersey sires Ab 206
Comparison of Holstein Friesian sires Ab 217
Comparison of Guernsey sires Ar 79
Factors affecting percentage of fat Ab 222
Official testing of dairy cows Ac 96
Relation between age Ab 65
Production and feeding of silage Ab 226
Silage investigation Ar 65
Tyler, E. E.
Farm beekeeping Ab 138
Typhoid fever prevention Bm 2
Universities, English, Sos v. 2 No. 2
U. S. History Sos v 2 No. 4
Variable Stars Ba 8-11, 13-19, 22, 23.
Vaughn, E. V.
English universities Sos v. 2 No. 2
Veblen, T.
Blonde race Bs v. 2 No. 3
Vegetables
Storing Aec 53
Vetch
Hairy vetch Aec 2
Visual education
Visual education for teachers Bed 18
Visual education Bex 43
Vivien Chevalerie Sl 1
Covenant Vivien S v. 1 No. 2
Waddell, R. L.
Feeding grain to suckling lambs Aec 139
Wade, Otis
Pocket gopher Aec 146
Wagons Ab 39, 52
Washburn, R. M.
Farmer's creamery Ac 18
Water prevention of pollution Bm 7
Water resources Ben v. 4 No. 3, also 15, 22
Water supply Ben v. 1 Nos. 2 and 23
Water systems for farm homes Aec 49
Waters, H. J.
Beef production Ac 24
Clover and cow peas Ac 6
Corn as stock food Ac 11

Fattening cattle Ab 76
Field exp. with corn Ab 14
Field experiments with corn Ab 32
Green forage for hogs Ab 79
Influence of width of tire on draft of wagons Ab 39
Inspection of commercial fertilizers Ab 77
Manures and fertilizers Ab 34
Studies of timothy plant Ar 19
Sugar beet Ab 40, 45, Ac 5
Wheat and oats test Ab 15
Wintering yearling cattle Ab 75
Watson, J. G.
Filling the silo Aec 5
Weaver, L. A.
Feeding of brood sows Aec 100
Feeding wheat to fattening swine Ab 136
Forag ecrop rotations Ab 110
Forage crops for swine Ac 55
Hogging down corn Aec 37
Relation of feed to protein Ar 73
Self feeders for fattening Ab 144
Weeks, Raymond
Covenant Vivien S 2
Chevalerie Vivien Sl 1
Weinbach, M. P.
Comparative tests of cylinder-oils Ben v. 4 No. 2
Welch, Lila
Related art Bed 17
Werewolf superstitution Sos v. 2 No. 3
Westcott, A. L.
Friction tests of lubricating greases and oils Ben v. 4 No. 4
Steam boiler trials Ben v. 3 No. 3
Wheat
Feeding to pigs Ab 29
Fertilizer Aec 28
Field experiments Ab 21
Growing wheat in Missouri Aec 29
Productive methods Ab 188
Some factors in wheat production Ac 56, Aec 149
Test of varieties Ab 15
Wheat growing in Missouri Ac 43
Wheat and corn Abc 3, 7
Whitten, J. C.
Apple orchard Ab 49
Apple growing in Missouri Ab 61
Asparagus Ab 43
Home vegetable garden Ac 83
Grapes Ab 46
Missouri apple growing Ac 32
Peach yellows Ac 4
Planting a backyard orchard Aec 65
Pruning peach trees Ab 55
Spraying orchards Ab 31
Time of planting vegetables Aec 21
Transplanting Ar 33
Winter protection of peach Ab 38
Wiggins
Fruitfulness of apples Ar 32
Williams, W.
Missouri laws affecting newspapers Bj 1
World's journalism Bj 9
Williams, W. S.
Roadmaking properties of Missouri stone Ben v. 2 No. 3
Willson, C. A.
Feeding swine Ac 28
Windsor, Wenona
How to cook soybeans Aec 44
War breads Aec 25
Winton, Berley
Home made poultry equipment Aec 151
Women and the newspaper Bj 30
Wood, D. C.
Cost of production in corn Aec 155
Milk production costs Ab 156
Wooly-aphis Ab 35, Ac 7
Wooley, J. C.
Better concrete Aec 124
Draft of farm wagons Ab 237
Fence posts Ac 108
Why build a silo Ab 214
Wright, F. L.
Raising pigs Aec 77
Writ of certiorari Bl 6, 13
Writer and publisher Bj 29

Young, Daisy
Implantation of glochidium on the fish Bs v. 2 No. 1

Zeits, Juliaetta
Handwork in the grades Bex 16
Zoology, Experimental Bs 8
Evolutional Bs 9

THE UNIVERSITY OF MISSOURI

The University of Missouri stands at the head of the educational system of the state. It was founded at Columbia in 1839, and instruction in academic work was begun in 1841.

The work of the University is now carried on in the following colleges and schools: College of Arts and Science, College of Agriculture, School of Education, School of Law, School of Medicine, College of Engineering, School of Mines and Metallurgy, School of Journalism, School of Business and Public Administration, School of Fine Arts, Graduate School, Extension Division.

All divisions are at Columbia except the School of Mines and Metallurgy, which is at Rolla. Emphasis has been given particular lines of work by the establishment of minor divisions, the chief of which are the Agricultural Experiment Station, the Engineering Experiment Station and the Missouri State Military School.

The fundamental aim of the University is the development of the highest and most efficient type of citizen. The school is supported by the state and endeavors to return to the state practical service. Of late years extension courses, experiment farms, and free literature on practical subjects have widely extended the University's influence.

The University grounds at Columbia cover more than 800 acres. The main divisions are the Francis Quadrangle, the East Campus, Rollins Field for athletics, and the University Farm.

Full information regarding the University is given in the catalog, a copy of which will be sent on request without charge. For this or special bulletins of the Graduate School, College of Arts and Science, College of Agriculture, School of Education, School of Law, School of Medicine, College of Engineering, School of Journalism, School of Business and Public Administration, School of Fine Arts, or Extension Division, write to

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LIBRARY SERIES NO. 13

Facilities and Resources of the University Library for Graduate Work

by

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Facilities and Resources of the University Library for Graduate Work

FACILITIES

The University has placed its best equipment and space at the service of graduate students. Additional seminar rooms will be provided when a new wing is added to the present central portion of the library. The circulation of "reserved" books to the underclassmen will be transferred to a room in the wing so that our present large reading room may be used for serious study.

The library already provides a limited number of seminar rooms where students may have the necessary quietness for study, concentration, books in easy reach, and accessible writing materials. Other books needed for research may be placed in the rooms within easy access of the students. For instance, if a student is investigating some phase or period of English history, he may be assigned to the Historical seminar where he will find a complete collection of the Hansard's Parliamentary debates, the English historical review and other works of a historical nature. The library grants stack permits to graduate students so that they may consult books in the stacks and decide on those which they may desire to have in the seminar. The stacks are provided with carrels on every floor where students and faculty may either consult books or study them.

The library furnished the students investigating botanical or zoological subjects a special reading room where they will find the best sets of journals and monographs and collected works on these subjects. The Medical library offers an attractive reading room, a part of which is occupied by the Medical book stacks. The Agricultural library reading room is spacious, attractive, well-lighted, and adjacent to the stacks on one side and to a research room on the other. When the law library is moved into the new Tate law building there will be nothing to be desired in library facilities on the part of graduate students in law and the social sciences. As the graduate school increases its enrollment, larger space and facilities will have to be provided for the library so that every inducement for study may be given the research student.

RESOURCES

However much adequate working conditions help the student, he cannot get anywhere without his books. Even the laboratory investigator must have his tools—the books. He may experiment on the effect of violet rays on the growth of plants, but he must know what records have been made and the results reached, the methods, if any, previously used. These he can find only in books.

The source material of the library is adequate in some lines of study but deficient in others. Large additions in all lines would make the collection more valuable. Students who may wish to study the history of music or missions in the Philippine Islands would find the library inadequate to their needs, but the student who may investigate political conditions in France during the

Middle Ages would have sufficient material. Our best university libraries such as libraries of Harvard and Yale are deficient in some line of research. They must borrow books from other libraries. No library is sufficient unto itself. Libraries are beginning to specialize in certain lines. They are not trying to cover the whole field of knowledge but are cooperating with other libraries in the same region in the purchase of expensive sets of books. For instance, Washington University, St. Louis, has purchased a complete set of Migne's Patrologia. The University of Missouri library will not buy this set but will borrow it from the Washington University library in case it is needed. Likewise the University of Missouri library has and will continue to purchase sets it can loan to Washington University library. The Union list of Serials in the libraries of the United States and Canada will facilitate the inter-library loans and decrease the necessity of the purchase of expensive sets by two libraries in the same district. Through this system of loans, the vast resources of eastern libraries are available to investigators in the University of Missouri.

The University library has a collection of more than 235,000 volumes. It has been enriched recently by the purchase of two private libraries—one on comparative law and history of mediaeval France, the other devoted to the classics. The former was the collection of Professor G. Jacques Flach, a French jurist, historian and professor of comparative legislation in the College de France from 1884 and of comparative law in the École des Sciences politiques from 1877 until his death in 1919. He was a research student concentrating on the history of ancient French law. His main work was Les Origines de l'ancienne France in four volumes. He was a native of Strassbourg and had a keen interest in collecting books and pamphlets which dealt with Alsace-Lorraine and Strassbourg. His library was therefore rich in the literature of this country, in the antiquities of France including such departments as Languedoc and o Germany, Austria-Hungary and other European countries. The collection consists of 6000 volumes of which 1300 deal with legal antiquities, comparative law, the ordinances of France, 500 volumes of French antiquities and history and 150 volumes of cartularies and diplomatics and 400 volumes on the history and antiquities of Alsace-Lorraine.

The second library was the private collection of Professor Paul Lejay, a French scholar and professor of classical literture and language in the Catholic Institute of France and editor for many years of the Revue Critique. He accumulated a library of 6000 volumes of which 3000 were in the field of the classical language and literature. He had 200 volumes on and by Cicero, 100 each on Horace and Virgil and from 25 to 90 volumes each on Livy, Lucretius, Lucan, Ovid, Plautus and Pliny. Edouard Champion writing about the Lejay library stated: "There are all the best editions of Horace and Virgil published by our old France, so fond of classics. There are many works published by the learned men of the XIX century in either French or German, such as dissertations on general and particular subjects, syntax, and grammar from the classics of even the Poetae Minores. In short there are all the classic collections from France, Germany, England and America that could be put together in the 30 years' life of a constant collaborator of the Revue Critique, (who became a member of the Institute, and was always fond of books, periodicals, pamphlets, several of them annotated with his own handwriting".

Bibliographical Aids.—No library is sufficiently equipped for research work which does not contain the standard and many special bibliographical works. The University library has the national bibliographies of France,

Great Britain, Germany, Italy, and of the United States. The Publications of the Bibliographical Society of America and of the Oxford Bibliographical Society are here complete many publications of the Bibligraphical Society of Great Britain also are here. It possesses the Evans Bibliography 1639-1794 of early printing in the United States, and the Bibliotheca Britannica by Watts, and the Bibliographies of special subjects such as Bibliotheca Chemica-Mathematica, Bradley's Bibliography for botanists, Rothschilds' Bibliographica Lacteria for the dairy student, Avery's Architectural library, Gallard's, Biblioteca Espaniola for the Spanish student, Fabricius, Bibliotheca Graeca for the classicist, and for the historians, Chauvin's Bibliographie des ouvrages Arabes, Potthast, Bibliotheca historica medii aevi and many others. Another enterprise of great service is the catalog of the books, periodicals, pamphlets, and music in the Library of Congress. The catalog printed on cards may be found in regional libraries, of which the University of Missouri library is one. This catalog makes available for research the vast collection of books in the Congressional library, although the books may be borrowed for Faculty members only. Another bibliographical tool which will be invaluable for the student in locating material is the Union List of Serials in the libraries of the United States and Canada. The provisional edition has been distributed. The work in its final form will appear in 1927. This shows the holdings of the larger libraries throughout the United States and Canada. It will facilitate the location of material and the loan of it to scholars.

Philosophy and Psychology.—The field of philosophy and psychology is well covered. The library has more than four thousand volumes on these subjects of which a thousand volumes are devtoed to psychology and one thousand volumes to modern philosophy. The ancient and modern philosophers and psychologists are represented by their published works and by works written about them. The current literature in the field of philosophy will be found in journals, transactions, and proceedings of learned societies. The library receives currently forty-six periodicals in this field, representing the contributions of France, Germany, Great Britain and the United States. Psychology is becoming an experimental science and requires a laboratory as well as a library. Twenty-three of our journals are devoted to various phases of psychology. The library has recently added three hundred volumes on philosophy from the private library of Dr. William Benjamin Smith, formerly professor of Philosophy in Tulane University.

Religion.—In the field of religious literature the library is strong in church history, Bible school and missionary work, and in editions of the Bible, parts of the Bible, and works about the Bible. The library purchases few books in this field as there is no chair of religion in the Universiry. The collection has been accumulated largely through gifts. However, nearly eight hundred volumes on theology and religious history were added through the purchase of the private library of Professor Lejay. This makes a total of 4500 volumes in the field of religious literature. The library possesses the standard dictionaries and encyclopaedias including the Catholic encyclopaedia, the Jewish encyclopaedia, Hastings Encyclopaedia of religion and ethics, his dictionaries of the Gospels and of the Apostolic church, and the Real encyklopaedie für praktische theologie. The library has also the Acta Sanctorum ordines s. Benedicti 1668-1701, the Acta Sanctorum ed. Bollandus 1863-1897; Dugdales' Monasticon Anglicarum, Mueller's Sacred books of the East, and the Babylonian Talmud. It has the works of the church Fathers and of such men as John Owen, John

Knox, Thomas Smyth, Joseph Bingham, Richard Hooker, John Huss, John Calvin, John Wycliffe, Bishop Cranmer and Martin Luther and of such modern divines as Phillips Brooks, Cardinal Newman, Augustus H. Strong and Adolph Harnack. The collection has recently been enriched by the gift of the William Benjamin Smith library in which there were nine hundred volumes of religious literature. In this collection were several translations of the Bible and reproductions of several celebrated codices of the Old and the New Testament such as: The Senaitic Codex discovered and edited by Tischendorff, Codex Ephraemi Syri Rescriptus, Codex Claromontanus, Beza Codex Cantabrigiensis, Codex Amiatinus. There is the Curetonian version of the Four Gospels, The Testament of the Twelve Patriarchs, the sons of Jacob; the works of Philo Judaeus; of Clement of Alexandria; Specilegium S. S. Patrum ut et Haerecticarum; and the very rare work—Novum Testamentum Graecum edited by J. J. Festiniun in two volumes, and many works on the life, letters and theology of St. Paul. The library is therefore better equipped in religious literature than many theological seminaries are.

Sociology.—Sociology is a comparatively recent science. Since the subject was introduced into the curriculum of the universities about twenty-five years ago, the literature of the subject has accumulated rapidly. The sociollogist considers his field to cover ancient and modern civilization, philosophy and psychology, history, ethnology, anthropology, biology, eugenics, labor and the laboring classes, philanthropy, criminology and many other subjects. In short, his field covers the origin and the development of society from primitive times to our very complex organization of the present. In the restricted fields of rural and urban society, socialism, ethnology, anthropology in the study and care of the unfortunate, crime, prisons and the like, the library is well equipped, having more than 4000 volumes including the standard works and source material. It has a special collection of books on ciminology including the greater and the lesser trials in courts, presented by the Late J. D. Lawson, for many years dean of the Law School, University of Missouri. The collection is known as the Lawson library. There are several thousand pamphlets and books dealing particularly with criminal trials. It was the Judge's working collection for thecompilation of his great work: *American State Ttials*. The riches of this collection containing many rare brochures and books have not been exploited. It awaits the arrival of a research student who may be interested in this important subject. Thirty-six periodicals on sociological subjects currently received in the library, cover the modern movements in the field of sociology.

Education.—Seventy-five hundred volumes on Education not including allied subjects, furnish a working library for the educator and the teacher but it cannot be so comprehensive as the special collections on education as the Penniman Library University of Pennsylvania or the educational collection of the Teachers College of Columbia University. However, the various fields of education, and the modern movements in education are sufficiently well covered as to make it possible for students to pursue their investigations. The collection is rather full of material on the history and philosophy of education, school organization, administration and supervision, on secondary and university education and on the methods of instruction. There are more than 2500 volumes on public education including the public education in the several states and in foreign countries. There are one thousand on methods, study, and teaching. Current educational thought covers a wide range. The essen-

tials of it may be found in some of the forty-four educational journals currently received in the library.

History and Political Science.—A student pursuing a line of research in political science will find that his investigations will take him into the field of history, economics, and sociology. The same statement is true in regard to a research problem in history. The material in the fields of history and political science overlaps. For example, the Parliamentary papers of Great Britain and those of Poland and France are used by students in history, political science, and economics, although they are classed with political science material.

The University library is undoubtedly better equipped in the field of history and political science than in any other broad field of investigation, except that of the sciences.

History of Missouri.—The research student working in the field of Missouri history, government, education, natural resources, will find in the State Historical Society, a collection of material second to none in the state. This collection is located in the University library building and is available to university students.

United States History.—The library contains 4000 volumes on United States history but is inadequate for research work. The works of American statesmen as well as the standard historical periodicals and the publications of historical society may be found on its shelves.

European History.—The library has a large collection of historical literature on Europe, especially on Great Britain and France. A considerable amount of research has been carried on in Contemporary Europe and world politics. The Flach library previously mentioned added many volumes to our large collection on the history and description of France. The library has the following titles of source material of the middle ages, listed in Potthast's Bibliotheca historica medii aevi:

Acta Sanctorum (Benedict)
Acta Sanctorum (Bollandus)
Baluzius Histoire des capitutaires des rois français
Bibliothek des litterarischen verein in Stuttgart
Camden Society. Publications
Chroniken des deutschen städte. (partial set)
Corpus Scriptorum ecclesiasticorum Latinorum
Goldast. Collectio constitutionum imperialium
Michaud. Nouvelle collection des mémoires pour servir a l'histoire de France
Migne. Patrologiae Latinae (partial set)
Monumenta Germaniae historica
Recueil des historiens des croisades
Scriptores rerum Germanicarum

Great Britain.—For twenty years courses in English history have been given in the University. The collection of books has grown according to the requirements of the courses of study and now contains works of great importance. The library has complete sets of Hansard's parliamentary debates, the Chronicles and Memorials of Great Britain, the "Blue books" or British Parliamentary papers from 1921 to date, the English historical review, Journal of the Parliaments of the Empire; Round Table, Scottish historical review, Camden's Britannica, Historical Mss. reports, Harleian Miscellaney, Domesday book, Camden society and others.

France.—The library is well equipped with literature on the history o France, especially the early history and the history of the provinces such a: Lanquedoc. Some titles of important source material are:

Recueil des historiens des Gauleset de la France
Sociéte de l'histoire de Paris. Bulletin and memoires
Sociéte de l'historie de france. Publications.
Mémoires rélatifs à l'histoire de France
Archives parlementaires 1787-1866
Michelet. Histoire de la révolution Française
Michelet. Histoire de France
Collection de documents inédits sur l'hlstoire de France
Histoire littéraire de la France

It has four hundred volumes on the history and antiquities of Alsace-Lorraine; 1300 volumes on the legal antiquities, comparative law and ordinances of the kings of France; and 150 volumes of cartularies.

Political Science.—The library is especially rich in the field of public law and comparative legislation, as indicated in the description of the Flach library. In addition to the material in the Flach library, the library has secured a complete collection of the publications of the League of Nations and the World Court, a complete set of Marten's Recueil des traites d'alliances de Paix de tréve, 94 volumes, Marten's Recueil des traites et conventions conclus par la Russie avec les puissances étrangéres, 12 volumes, complete set of Hansard's parliamentary debates, the Parliamentary history of England from the earliest period to 1803, Parliamentary papers of Great Britain from 1921 to date, Archives parlementaires (France) 1787-1860, and Journal officiel de la Republique Françias 1919 to date. A few titles of periodicals will indicate the strength of the library in history and political science. Practically all the sets are complete.

American historical review
American journal of international law
American journal of political science
Annals of the American academy
Annuaire de legislation française
Annuaire de legislation étrangére
Archives des oeffentlichen rechts
Deutsche. juristen. zeitung
English historical review
Europe nouvelle
Foreign affairs.
Historische zeitschrift
Iahrbuch für gestzegebung
Jahrbuch des oeffentlichen rechts der gegenwart
Journal of comparative legislation
Journal of the Parliaments of the empire
Journal du droit international privé
Journal of public administration
Klio
Kritische Vierteljahreschrift für gesetzgebung
La France judiciaire
Moslem world
Recueil général des lois décrets et ordonnances de France

Reichsgesetzblatt
Revista mexicana de derecho international
Revue de droit international et de législation comparée
Revue des questions historiques
Revue de synthése historique
Revue du monde musulman
Revue de Pologne
Revue des études Hongroises
Rue des études slaves
Revue général d' administration
Revue d' histoire diplomatique
Revue historique
Revue historique de droit français et étrangére
Round Table.
Scottish historical review
Slavonic review
Societe de legislation comparée. Bulletin and annuaire
Zeitschrift fuer geschichtliche rechtswissenschaft
Zeitschrift fuer internationales recht (niemeyer)
Zeitschrift für vergleichende rechtswissenschaft

The library receives 70 periodicals currently in this field.

Commerce and Economics.—The library is well equipped with literature in the important subject of capital and labor. The library has been receiving for twenty years the official publications of labor organizations such as the Bridgemen's magazine, the Carpenter, the Typographical journal and many others. It has the reports on labor conditions published by the several states, the Federal government, by foreign governments, and all the important labor journals. It contains the insurance reports of all the states and reports, the railways reports of the several states, and the publications of Interstate Commerce Commission and the controversial pamphlets and books on the mooted railway questions. The literature covers also the subjects, money, credit, banking, public finance, protection and free trade, production, manufacturing, prices, corporations, and others. There are 10,000 volumes, hundreds of pamphlets and all the important economic journals in the collection. The research student in economic subjects will find a large collection. of material awaiting him.

Literature

1. *American Literature.*—Very little graduate work has been done in this University in American literature. The collection is not large but it contains complete works of the main writers such as Hawthorne, Irving, Henry James, Longfellow, Lowell, Poe, Riley, Thoreau, Whitman. The State Historical Society library, housed in the same building with the University, has a rather complete collection of the writings of Eugene Field and Mark Twain. The Twain collection was recently enriched by the addition of the library collected (over a period of years) by Purd B. Wright, Librarian of the K. C. Public Library. Cambridge history of American literature and the histories by Richardson and Moses Coit Tyler, and Wendell; Library of American literature by Stedman and Hutchinson, Library of the world's best literature by Warner, and the Library of literary criticism by Moulton are a few of the books of a general nature. The language and literature journals cover several languages and are listed under English language and literature.

2. *English Language and Literature.*—English literature is a large field and has numerous subjects worthy of the consideration of research students. In many divisions the material is adequate but not so large as desired. The journals and publications of societies fairly represent the philology and literature of this field. The material in the journals, such as the American Journal of Philology and Modern philology, covers not only the English language but also the romance and classical languages. The library has the publications of the several universities in philology and literature and the majority of the philological journals published, including such titles as the Modern language association publications, American philological Association, proceedings, Poet lore, Poetry, Drama, Anglia, Bonner beiträge, Wiener beiträge, Yale studies in English and Early English text society, publication. The library possesses the complete works of all the standard authors and in many cases the books of criticism, and lives of the authors, various editions, translations and the like. The library is equipped to furnish material for research work on Browning, Chaucer, Defoe, DeQuincy, Dickens, Dryden, George Eliot, Fielding, Bulwer Lytton, W. H. Hudson, Ruskin, Scott, Stevenson, Swift, Tennyson, Milton, Spenser and Wordsworth. The library has several choice editions of Milton such as poetical works, edited by Brydges, 1862.

Poetical works	ed. by Mitford 1851	8 volumes
Poetical works	ed. by Hayley, 1794-97	3 volumes
Poetical works	ed. Montgomery 1843	2 volumes
Poetical works	ed. by Todd 1801	6 volumes
Poetical works	ed. by Gilfillan 1853	2 volumes
Paradise regained	ed. by Dunster 1795	
Prose works	ed. by Symmons 1806	

There are several good editions of Edmund Spenser and a concordance to his works.

Poetical works	First Am. ed.	1839	5 volumes
Poetical works		1866	5 volumes
Poetical works	ed. Gilfillan	1859	5 volumes
Poetical works	Grosart	1882-4	9 volumes
Works		1715	6 volumes
Works	ed. by Todd	1805	8 volumes
Works	ed. by Collier	1873	3 volumes

The editions of Wordsworth are not so numerous as those of Spenser but in addition to his works the library has a complete set of the transactions of the Wordsworth Society. Some of the important editions are:

Poems	ed. by N. C. Smith	1908	3 volumes
Poetical works	New ed. 1849-50		6 volumes
Poetical works	(British poets) 1854		7 volumes
Poetical works	ed. Dowden 1892-3		7 volumes
Poetical works	ed. Knight 1896		8 volumes
Prose works	ed. by Wm. Knight 1896		2 volumes

Shakespeare.—The library has more than 500 volumes on Shakespeare and Early English drama, including the Materialen zur kunde des älterer Englische drama. The publication of the Shakespearean Society, the new Shakespeare Society, the Shakespeare Jahrbuch, Dodsley's old English plays,

lexicons and concordances, are helpful to the research student in this field. Some of the editions of Shakespeare important for research study are:

Works	Ed. by R. G. White 1901	6 volumes
Works	Ed. by Porter & Clarke 1903	12 volumes
Works	Ed. by Halliwell 1850-53	2 volumes
Works	The Leopold Shakespeare	
Works	New variorum ed. by Furness 1871-1913	18v.
Works	Ed. by J. P. Collier 1853	8 volumes
Works	Ed. by Dyce	7 volumes
First folio facsimile	ed. by Halliwell-Phillipps 1887	
Works	Ed. by Knight. Illustrated	2 volumes
Works	ed. by W. A. Wright 1891-93	9 volumes
Boydell's Illustrations of Shakespeare's plays. Am. ed.		2 volumes.

The library has also a creditable collection of ballads and folk songs including Publications of the Ballad Society, 38 vols.; Child's English and Scottish ballads; Percy, Ballads and Romances; Scott, Minstrelsy of the Scottish border; and publications of the Folk song society.

Romance Language and Literature.—The library is well equiped with material for the study of the history of French literature and for the literature of the early period. There is sufficient material for a study of Dumas, Hugo, Molière, Sainte Beauve, George Sand, Sue, and Voltaire. For the study of the language the Atlas linguistique recently acquired is indispensable. The library has a complete set of the publications of the Sociètè des ancien textes, Bibliothèque du 15 siècle, Gesellschaft für romanische literatur and others. All the important journals devoted to the languages and literatures of France, Italy a Spain may be found on the library shelves.

Germanic Language and literature.—The collection of German literature is not large but it is well selected. All the important writers are represented by one or more editions of their complete works. One would find Fontane, Freytag, Grillparzer, Hauptmann, Hebbel, Heine, Herder, Heyse, Keller, Lessing, Rosegger, Schlegel, Tieck, and others on the shelves. Goethe is represented by six complete editions of his works—165 volumes. There are two extended lives of Goethe—Bieschowsky in 3 volumes. Dünster in two; the Jahrbuch and Schriften of the Goethe Gesellschaft and many editions of separate works, books of criticism etc. Schiller too is represented by six editions of his works, besides many separate works, lives and criticisms. Then there is Kürschner, Deutsche national litteratur, a collection of the works of German authors. The important journals dealing with the German language and literature are also here: thirty-three of them are currently received.

Classical Literature.—The library's collection of books on classical languages is quite complete and is one of the best. The collection was enriched in 1921 by the purchase of the private library of Paul Lejay, a well known French Scholar, and professor of the Classica in the Catholic Institute of Paris. It was his working collection in classical literature. Nearly 3000 volumes on this subject was added to the library's good collection. He had 200 volumes on and by Cicero, 100 each on Horace and Virgil—and from 25 to 90 volumes each on Livy, Lucretius, Lucan, Ovid, Plautus and Pliny. Edouard Champion writing about this Lejay library said: There are all the best editions of Horace and Virgil published by our old France, so fond of classics. There are here all works published by the learned men of the XIX century either French or German, such as dissertations on general and particular subjects, syntax,

grammar from the classics of even the poetae minores. In short the student may consult all the classic collections from France, Germany, England, and America that could be put together in 30 years' life of a constant collaborator of the Revue Critique, who became later a member of the Institute, but always fond of books, periodicals, and pamphlets, several of them annotated with his own handwriting."

In addition to the books and pamphlets the library has practically all the classical Journals, 37 being received currently. The research student therefore has at hand the resources for many lines of research in the literature and language of the ancient Greeks and Romans, and in ancient history as well.

Science.—The research work in the sciences is conducted in the laboratories supplemented by the information in books, The scientific research worker, therefore, doesn't use so many books as the researcher in the humanities makes use of. In the field of literature and history, the library is the laboratory. Research students have been more active in science than in literature, hence, we find that the library contains more books in science than it does in literaature. The purchases have been made according to the demands for both graduate and undergraduate work.

The important sets of works such as the Comptes rendus of the Academie des sciences, the American, Australian and British associations for the advancement of science, the Philosophical Society of Glasgow, Royal societies of Canada and London, the Philosophical magazine, and the New Zealand institute may be found on the shelves of the library.

The library is well equipped in the several subdivisions of science. Mathematics is represented by 2500 books and 30 current magazines published in France, Germany, Italy, Great Britain, Japan, the United States, and several other countries. The collected works of such mathematicians as Cayley, Euler, Hill, Brahé, Darwin and Galileo, are in the collection.

In astronomy the working collection is in the observatory. The collection includes the publications of all the medium and large observatories in the world. The records and the results of observations throughout the world and the important works of astronomers are available for research work.

In Physics, too, the books supplement the experimental work, Poggendorf's Annalen and the publications of the English and German physical societies are available. So also are the works of Chwolson, Clerk Maxwell, Sir William Thompson, Lord Rayleigh, C. G. Stokes, P. G. Tait, and Winkleman.

In Chemistry, another field of experimental work, the results of research are available in the back files and current numbers of the 25 journals currently received and those which have ceased publication. The proceedings, transactions, and journals of the English, French, German, and American Chemical societies are available in the Library. There are 4500 books in the Chemical section of the library, awaiting exploitation by the research student. Students in Geology will find the publications of the United States geological survey and those of the several states available. They will find also nearly 4000 books and 27 current magazines dealing with the geology of the various countries, with physical and economic geology, with oil and gas productions, with mineralogy and paleontology. The field of biology has been worked for 25 years back. There has been a gradual accumulation of books and sets of journals so that now the Biological laboratory is one of the best equipped on the campus. All the leading journals are on file in the laboratory which for the most part are complete from the beginning. The total number of books available for re-

search work in botany and zoology is 5000 special and 5000 general works of science. The private library of the lat Dr. Lefevre and his collection of severale thousand reprints were purchased by the University and placed in the Biology library. The list of journals devoted to botany and zoology follows. There are others in general science not included which have articles on these subjects.

BIOLOGY ZOOLOGY BOTANY

Acta zoologica
American journal of botany
American microscopical society. Trans.
Annales des sciences naturelles botanique
Annals of applied biology
Annals of botany
Annales de parasitologie
L'année biologique
Archiv für protistenkunde
Archiv für zellforschung
Australian journal of experimental biology and medical science.
Archives de biologie
Archives de zollogie experimentale
Arkiv for botanik
Arkiv for zoologie
Bibliographia zoologica
Biological bulletin
Biologisches centralblatt
Biometrika
Botanical gazette
Botanical abstracts
Botanisches centralblatt
Botanisches centralblatt: Beihefte
Botanischer jahresbericht
British journal of experimental biology
Cambridge philosophical society. Proceedings in Biological sciences
Cellule
Centralblatt für bateriologie Abth. 2
Deutsche botanisches gesellschaft
Ecology
Flora
Genetics
Isis
Jahrbücher für wissenschaftliche botanik
Jenaische zeitschrift für naturwissenschaft
Journal of ecology
Journal of genetics
Journal of biological chemistry
Journal of experimental zoology
Journal of morphology
Missouri botanical garden. Annals and Bulletins
Mitteilungen aus der zoologischen station zu Neapel
Mycologia
Naples—Stazione zoologica. Pubblicanzioni

New phytologist
Phytopathology
Quarterly journal of microscopical science
Revue générale de botanique
Torrey botanical club. Bulletin and memoirs.
Torreya
Zeitschrift für botanik
Zeitschrift für wissenschaftliche zoologie
Zeitschrift für wissenchaftliche mikroskopie
Zoologische jahrbücher
Zoologischer anzeiger
Zoological record

THE AGRICULTURAL LIBRARY

The facilities for research in Agricultural subjects are second to none on the campus. The library occupies a commodious reading room, well lighted and well ventilated on the second floor, south side of the new Agricultural Building. Opening out of the reading room to the east is a large stack room containing 17000 volumes and room for tables for private study. On the west of the reading room is a seminar where the library's large collection of 9000 volumes of Herd books is shelved.

The collection of the publication of the U. S. Department of Agriculture of the several state boards of Agriculture and of the Agricultural Experiment Stations of the various states and of foreign countries is quite complete. If the research student wishes information on any phase of agriculture in Italy, France, Germany, Hawaii, South Africa, India, Japan Brazil, and other countries he will find it in the Agricultural Library. The library is well supplied, with books, periodicals, reports and the like on fruit growing, on soil fertilization, on insects and insect pests, on dairying, on poultry raising, on horses, on cooperative marketing, on questions of rural life, on landscape architecture. It has a complete file of the publications of the International Institute of Agriculture, a complete set of Sargent, Silva of North America, and of Wytsman, Genera insectorum, Nearly 200 periodicals are currently received, exclusive of government and Experiment Stations publications.

LAW LIBRARY

When the Law Library is housed, in the new Law building, it will offer adequate facilities for research work. Many text books have been written from its source material. It has 25,000 volumes now and is supplemented by several thousand volumes in the General Library on comparative law and on legal antiquities described above.

The library contains the complete series of the reports of the Supreme Court of the United States and of the Federal, District, Circuit, and Appellate courts and the reports of circuit and supreme courts of all the states, also the American decisions, the American reports, Lawyers reports, a complete file of the Reporter system, all of the Shepard citations of the national reporter system which are procurable, a collection of English ruling cases and a large collection of English reports, also complete sets of nearly all of the legal journals, both American and English, and a large collection of the latest and best text books.

MEDICAL LIBRARY

Medical library was recently moved into the new addition to the Medical building where there is ample room for study and for books. There are nearly 10,000 volumes in the collection supplemented by 5,000 in the General library. Special attention has been given to the securing of all the important medical journals and to the completion of our journal files. Purchases have been limited practically to departments of Medicine: Anatomy, Physiology and Pathology and Public Health. These fields are well covered in the periodical literature. It receives currently 138 medical journals for which subscriptions are paid annually. With few exceptions the library has complete files of its journals, many of which are rare. Virchow's Archiv für path. anatomie and Pflüger's Archiv für die gesamte physiologie are two of the most valuable periodical sets in the collection. In the field of physiology, there are twenty-one primary journals and as many more devoted to other fields which have articles in some phase of physiology. Professors in the medical school have found the resources of the library quite adequate to their needs. Sources not in possession of the library may be borrowed from other libraries for the research student.

ENGINEERING LIBRARY

The Engineering library is equipped for graduate work in chemical, civil, electrical, and mechanical engineering. The library receives currently 112 professional journals, many of which are either complete from the beginning or have long runs.

JOURNALISM LIBRARY

Considerable graduate work has already been done in the field of Journalism. The library possesses about 2,000 volumns and receives currently nearly five hundred magazines and newspapers. The library subscribes to one hundred and thirty periodicals and one hundred and three newspapers. The literature of Journalism is not yet very extensive. This library has much of the best. With a generous amount of money for annual purchases, the library may become in a few years the best of its kind.

THE UNIVERSITY OF MISSOURI

The University of Missouri stands at the head of the educational system of the state. It was founded at Columbia in 1839, and instruction in academic work was begun in 1841.

The work of the University is now carried on in the following colleges and schools: College of Arts and Science, College of Agriculture, School of Education, School of Law, School of Medicine, College of Engineering, School of Mines and Metallurgy, School of Journalism, School of Business and Public Administration, School of Fine Arts, Graduate School, Extension Division.

All divisions are at Columbia except the School of Mines and Metallurgy, which is at Rolla. Emphasis has been given particular lines of work by the establishment of minor divisions, the chief of which are the Agricultural Experiment Station, the Engineering Experiment Station and the Missouri State Military School.

The fundamental aim of the University is the development of the highest and most efficient type of citizen. The school is supported by the state and endeavors to return to the state practical service. Of late years extension courses, experiment farms, and free literature on practical subjects have widely extended the University's influence.

The University grounds at Columbia cover more than 800 acres. The main divisions are the Francis Quadrangle, the East Campus, Rollins Field for athletics, and the University Farm.

Full information regarding the University is given in the catalog, a copy of which will be sent on request without charge. For this or special bulletins of the Graduate School, College of Arts and Science, College of Agriculture, School of Education, School of Law, School of Medicine, College of Engineering, School of Journalism, School of Business and Public Administration, School of Fine Arts, or Extension Division, write to

THE REGISTRAR,
UNIVERSITY OF MISSOURI,
COLUMBIA, MISSOURI

THE UNIVERSITY OF MISSOURI BULLETIN
VOLUME 27, NUMBER 48

LIBRARY SERIES NO. 14

List of Periodicals Currently Received by the University Library 1926

by

HENRY O. SEVERANCE
Librarian, University of Missouri

Check List of Student Serial Publications

by

JOHN H. DOUGHERTY
Assistant Librarian, University of Missouri

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DECEMBER 21, 1926

PREFACE

This list includes periodicals currently received in the University Library in 1926. The numbers following the titles indicate the holdings of the library. For instance, the entry "Atlantic Monthly 1+" indicates that the file is complete from volume one to date. Titles of publications appearing annually are not included. The purpose of the list is to facilitate the location of periodicals and to answer the question, what volumes or what years of the periodical are available in the University Library? Faculty, students and non-resident readers will find the list useful. The alphabetical list is followed by the list of periodicals currently received in the branches. The second part of the bulletin contains a check list of the student serial publications. The holdings of the University library and of the State Historical Society library are indicated by M and H respectively. If any of the alumni have copies of these titles lacking in the Library files and would present them to the Library, complete files could be preserved.

The following abbreviations are used to denote locations of the periodicals. All titles are in the main library except those indicated by an abbreviation.

Ag.—Agricultural library
B—Biological library
E—Engineering library
H. E.—Home economics office
J—Journalism library
L—Law library
M—Medical library
O—Observatory
V—Veterinary
#—Indicates the title has not been bound.

HENRY O. SEVERANCE

November 20, 1926

Part I.

A List of Periodicals Currently Received by the Library

Aberdeen-Angus journal. Ag. 1+
Aberdeen University. Studies 63-67, 74. 80-85, 88+
Abo akademi. Acta humaniora 1+
Academia de ciencias exactas fisicas y naturales. Madrid.
Memorias 27, 29
Revista 13-14
Academia das ciencias de Lisboa.
Actas 1-2
Boletin bibliografico 1+
Classe de ciencias. Boletin actas 1-2
Jornal de ciencias mathematicas 1-5
Academia de ciencias med. fis. y naturales de Havana.
Anales. Revista cientifica 38-46, 48+
Academia nacional de la historia Caracas.
Boletin 1-4. 8, 10+
Academia national de ciencias. Cordoba.
Actas 7
Boletin 17-18,+
Miscellanea 1-9
Academia polytecnica do Porto. Annaes cientificas 1+
Academie de Neuchatel. Recueil de travaux 1+
Academie des sciences belles-lettres de Lyon, Memoires S 3 V 15+
Academie des sciences coloniales. Comptes rendus 1+
Academie des sciences morales et politiques Paris. Comptes rendus des seances et travaux 1840+
Academie des sciences. Paris. Comptes rendus 1+
Academy notes (1-47)+
Academy of natural sciences of Philadelphia. Proceedings 54-56, 58 (67)+
Academy of political science. Proceedings 1+
Academy of science of St. Louis. Transactions 1+
Accademia dei Lincei, Atti
Classe di scienze fisichi. Atti. Ser. 5, 24+
Classe di scienze morali. Rendiconti S 5 v 13+
R. accademia d. scienze d. istituto di Bologna.
Rendiconti, class sci morali 1+
Memorie scienze guirdiche+
Memorie, scienze classe storico-filologiche 1+
Accademia scientifica Veneto-trentino istriana. Atti Ser 3. 12+
Accountant 43+
Accounting review 1+
Acropole 1+
Acta mathematica 1+
Acta medica Scandanavica. M. 56-59. 61+
Acta zoologica. B. 1+
Actuarial society of America Trans. 1+
Adelaide University Keith Sheridan foundation. Publications 1+
Adelphian of Alpha delta pi (9) 10-16 (17-18) 19+
Adult education and the library 1+
Advertiser's weekly. J.
Advertising and selling. J. 24+
Advertising world. J. 27+
Aglaia of Phi Mu 15+
Agricoltura ferrarese. Ag. 1920+
Agricultural and industrial progress in Canada 6+
Agricultural cooperation. Ag. 1+
Agricultural engineering. Ag. 1+
Agricultural gazette of New South Wales. Ag. 5, 13+
Agricultural Index. Ag. 1+
Agricultural journal of India. Ag. 1+
Agricultural library notes. Ag. 1+
Agricultural reviews. Ag. 4+
Agricultural situation. Ag. 7+
Akademie der Wiss. Berlin see Preussische Akademie
Akadamie der Wissenschaften Vienna
Sitzenberichte, math-natur. klasse 110+
Sitzenberichte, phil-hist. klasse 144+

Akademiia Nauk
Bulletin Ser 5. (13) 14+.
Travaux de musee geologique 1-4
Alabama
Geological Survey. Bulletin 4+
Alaska school bulletin 4+
#Alpha aids. E.
Alpha gamma delta (2-17)+
Alpha phi quarterly 22-29, 32+
#Ambition
American academy of arts and sciences. Boston. Proceedings 37+
American academy of ophthalmology and oto-laryngology. Trans. 24+
American academy of pol. and soc. science Annals 1+
American anatomical memoirs. M+
American anthropological association. Memoirs. 1+
American anthropologist 1-3. N. S. V. 1-7, 9+
American art news see Art news
American association of petroleum geologists. Bulletin 1+
American association of university professors. Bulletin 1+
American association of university women. Journal 19+
American astronomical society. Pubs. 1+
American bar association. Journal. L. 1+
American bee journal. Ag. 39+
#American boy. J.
American builder. E. cop. 2 Ag. 1+
#American campus. J.
American Catholic historical society. Records 1-3(4)+
American Catholic quarterly review 17. 23. 33+
American chemical society. Journal 1+
American child 1+
American child hygiene ass'n. Trans. 1+
American childhood (1-3) 4-6. (7) 8. (9) 10+
American city. Cop. 2. Ag. 1+
American concrete institute. Proceedings. E. 1+
American cookery. 14+
American digest (advance sheets) L.
American economic review 1+
American economist 27+
American educational digest (45) 46+
American electric railway association. Proceedings. E. 4-18. 20+
American electro-chemical society. Trans. E. 1+
American entomological society. Trans. 4+
American farm bureau federation weekly news letter. Ag. 4+
#American farming. Ag.
American federationist. C. 2. L. 9+
American fertilizer. Ag. 1-19, 29 48. 52+
American florist. Ag. 10+
American food journal. H. E. 9+
American foreign service journal 1+
American forests and forest life. Ag. 5+
American friends service committee. Bulletin 41-43. 58+
American fruit grower. Ag. 17 25. 29-36. 39+
American gas engineering journal. E. 97+
American hereford journal. Ag. 1-2. 4+
American historical review 1+
American industries 1+
American institute of criminal law. Journal. C. 2. L. 1+
American institute of electrical engineers. Journal E. 40+
American institute of weights and measures. Trans. 1-2, 4 6. 8+ Bulletin (1924) 1925+
#American Issue
American Jewish historical society. Publications. 1+
American journal of anatomy. M. 1+
American journal of archaeology 1+
American journal of botany. B. 1+
American journal of diseases of children. M. 11+
American journal of hygiene. M. 1+
American journal of international law. L. 1+
American journal of mathematics 7+
American journal of the mecial sciences. M. 1-9. 12-15. 17 n. s. v. 15.16. 19-84. 87, 91, 93+
American journal of nursing. M. 3+
American journal of pathology. M. 1+
American journal of pharmacy. M. 1+

American journal of philology 1+
American journal of physical anthropology 1+
American journal of physiology M. 1+
American journal of psychology 1+
American journal of public health. M. 1+
American journal of roentgenology. M. 1+
American journal of science 1+
American journal of semitic languages and literature 1-(5-6)+
American journal of surgery. M 1+
American journal of sociology 1+
American journal of syphilis M. 2. 4+
American judicature society. Journal L. 1, 4+
American journal of tropical medicine M. 1+
American labor legislation review. 1+
American law review. L. 1+
American law school review. L. 1+
American library association. Bulletin 1+
American library institute. Papers 1915+
American machinist. E. 14-27. 29+
American magazine C. 2. J. 65+
American magazine of art 6+
American mathematical monthly 20+
American mathematical society. Bulletin 1+
American mathematical society. Trans. 1+
American medical association. Journal. M. 16. 18+
American mercury. C. 2. J. 1+
American microscopical society. Trans. B. 1+
American midland naturalist 1+
American miller. Ag. 36+
American mineralogist (1)+
American mining Congress. Proceedings 6+
American monthly review of reviews 1+
American museum bulletin 1. 25+
American museum journal continued as natural history.
American museum of natural history Anthropological papers 1 +
American naturalist 1-7, 16, (17), 21,26+
#American news trade journal. J.
American nut journal. A. 6+
American oxonian 1+
American philological association. Trans. 1+
American philosophical society. Proceedings 1744-V.6-37. 39+
American physical education review 1+
American pigeon j ournal. Ag. 6+
American plan (1-3) 4+
American political science review 1+
American pomological society. Proceedings. Ag. 13-25, 27-31. 33+
American poultry advocate. Ag. 17+
American poultry journal. Ag. 41-43. 53+
American pressman. J. 32+
American printer. J. 1 +
American prison association. Proceedings 1874. 1887+
American proctologic society. Trans. 15+
American railway engineering association. Proceedings. E. 9,11+
American reporter-adv. sheets. L.
American review 1+
American review of reviews 1+
American Scandinavian review 1+
American school board journal 12-27. 29+
American school master (17—18) 19+
American school of oriental research. Bulletin 5+
American sheep breeder. Ag. 13-21. 23-24 26+
American society for horticultural science Proceedings. Ag. 1+
American society for testing material. Proc. E. 1916+
American society of agricultural engineers. Trans. Ag. 1+
American society of agronomy. Journal. Ag. 1+
American society of animal production. Ag. 2+
American society of civil engineers. Trans. E. 1+
American society of heating and ventilating engineers. Journal. E. 1+
American society of mechanical engineers. Trans. E. 1916+

American sociological society. Proceedings 1+
American speech 1+
American statistical association. Publications (1)+
American swineherd. Ag. 27+
American thresherman. Ag. 11-14. 16-20. 25+
American veterinary med. ass'n. Journal. Ag. 2+
American waterworks ass'n. Journal. E. 1+
Amherst graduates quarterly 1+
Amsterdam University. Sterrenkundig institut. Pub. 1+
Anales de ingenieria. Bogota. E. 20+
Analyst 1-22, 26+
Anatomical record. M. 1+
Anatomical society of Great Britain & Ireland. Proc. (In journal of anat. & physiol.)
Anatomischer anzeiger. M. 1+
Anchora of Delta gamma 26-33, 36+
Anesthesia 1+
Anglia 1+
Anglia. Beiblatt 1+
Anglistische forschungen 1+
Annalen der chemie. (Liebig's) 40-44, 81-144, 153-164, 173-418, 421-426, 428-446+
Annalen der philosophie 1+
Annalen der physik 77-134, 173-175, 218+
Annalen der physik. Beiblatter 1+
Annales de chimie 1+
Annales de geographie 31+
Annales de la science agronomique. Ag. 1+
Annales de medicine. M. 7+
Annales de parasitologie humaine et comparee B1+
Annales de physique 1+
Annales des sciences naturelles. Botanique. B. s 9 v. 11+
Annales du midi 1+
Annales mycologici. B. 1+
Annili di matematica 1-7. s 3 v. 1+
Annalist 3+
Annals of applied biology. B. 1+
Annals of Botany. B. 1+
Annals of clinical med. M. 1+
Annals of Iowa 10+
Annals of mathematics 1+
Annals of med. history. M. 1+
Annals of surgery. M. 1+
Annee biologique. B. 1+
Annee psychologique 1+
Arbeiten aus den K. gesundheitsamte. Ag. 54+
Arcetri. Osservatorio. Pub. 1+
Archaiologike ephemeris 1902+
Architectural forum 26+
Architectural record 1+
Architecture and building (13-30) 32+
Archiv des offentliches recht 1-3. 6+
Archiv fur anatomie and physiologie. M. 1+
Archiv fur das studiem der neueren sprachen 92+
Archiv fur die gesammte physiologie. M. 1+
Archiv fur die gesammte psychologie 1+
Archiv fur entwickelungsmechanik der organismen anat. B 1+
Archiv fur experimentelle zellforschung B 1+
Archiv fur exper. path. u. pharmakologie. M. 78+
Archiv fur Frankfurts geschichte und kunst s 3, v. 9-12
Archiv fur geschichte der philosophie 1+
Archiv fur gynaekologie. M. 1+
Archiv fur hygiene. M. 72-84, 88+
Archiv fur kinderheilkunde. M. 36-66. 68+
Archiv fur klinische chirurgie M. 104+
Archiv fur mikroskopische anatomie. M. 1+
Archiv fur path. anat. u. physiologie. M. 1+
Archiv fur protistenkunde. B. 1+
Archiv fur rassen u. gesellsch. biologie 1+
Archiv fur systematische philosophie 1+
Archives d'anat. microscopique. M. 1+
Archives de biologie B 15-17. 25+
Archives de psychologie 1+
Archives de zoologie experimentale. B. 40+
Archives des malades du coeur. M. 1923 +

Archives des sci. physiques et naturelles 29+
Archives int. de pharmacodynamie. M. 1+
Archives internationales de physiologie. M. 7+
Archives italiennes de biologie. M. 1+
Archives neerlandaises des physiologie. M. s 2. v 1-15: S 3 v. 3+
Archives of internal medicine. M. 1+
Archives of ophthalmology M. 1+
Archives of pathology. M. 1+
Archives of psychology 1+
Archives of surgery. M. 1+
Archivio di farmacologia sperimentale. M. 9+
Archivio di storia della scienza. 7+
Archivo di fisiologia. M. 1+
Archivo Italiano di anatomia. M. 1+
Archivos de botanico do estado de S. Paulo 1+
Archiwum rybactiwa Polskiego 1+
#Argonaut
Arizona. University. Record
#Arkansas. University. Bulletin
Arkiv for botanik. B. 1+
Arkiv for matematik astronomi och fysik 1+
Arkiv for nordisk filologi 27+
Arkiv fur zoologie. B. 4+
Art and archaeology 1+
Art in America 2+
Art news 9-17, (18) 19, (20) 21, (22-23) 24+
Arts and decoration. 1+
Asia 18-22, 24+
Asiatic Review. J.
Associated advertising. J.
Associated engineering societies. St. Louis. Journal. E. 1+
Associated mountaineering clubs of N. A. Bulletin 1923+
Association of American colleges. Bulletin 4. 6. 7. 9+
Association of American geographers. Annals 1+
Association of American universities. Journal 1+
Association of colleges and secondary schools of the middle states. Proceedings. 4+
Association of colleges and secondary schools of the southern states. Proceedings. 1+
Association of landgrant colleges. Proceedings 4. 24+
Association of life insurance presidents. Proc. 1, 3+
Association of official agricultural chemists. Journal 1+
Association of official seed analysts. Proceedings 7-9. 11+ (1-6 not pub.)
Astronomical journal. O. 1+
Astromonical society of Pacific. Pubs. 1+
Astronomische nachrichten. O. 1+
Astronomische jahresbericht 1+
Astrophysical journal 1+
Atlanta university. Publications 1+
Atlantic reporter. (advance sheets) L. 1+
Atlantic monthly. cop. 2. J. cop. 3. E. 1+
#Auburn engineer. E.
Auburn seminary record. 1+
Augustana college and theological sem. Pubs. 1+
Australian forestry journal. Ag. 1+
Australian journal of exper. biologie and med. science B. 1+
Author and journalist. J. 1925+
Automotive industries. E. 1+
Aviation. E. 1+
Ayrshire digest. Ag. 1+

#Baking technology. Ag. 1+
Banker's magazine 72 +
Baptist. J. 1+
Barcelona museu de ciencies naturales. Ser. botanica. Memories 1+; Treballs 4+
Barclays bank Mo. review 5+
#Bates college bulletin
Baton 1926+
Barnes foundation. Journal 1+
K. Bayerische akad. d. wiss. Munchen. Sitzenb. math. phys. klasse 31+
K. Bayerische akad. d. wiss. Munchen. Sitzenb. phil.-hist. klasse 1876+
#Baylor university. Bulletin
Baylor university museum. Contributions 1+

Bee keepers' item. Ag. 10+
Bee keeper's review. Ag. 9-16. 19+
Bee world Ag 7+
Beitrage zur geschichte der deutschen sprache 1+
Beitrage zur geschichte d. philos. des des mittelalters 1+
Beitrage zur path. anat. M. 1+
Beitrage zur pflanzenzucht. Ag. 2+
Belgium. Statistics. Bulletin 9+
Bell system technical journal. E. 1+
Bell telephone quarterly. C. 2. E. 1+
#Bellona
Bent of Tau beta pi (10)+
Besancon. observatoire national. Bulletin chronometrique 3-5, 7-13 15+
Better crops. Ag. 1+
Better fruit. Ag. 1+
#Bible champion
Bible college of Missouri. Bulletin 1+
Biblical review 2+
Bibliographia zoologica. B. 1-11. 14+
Bibliographical society of America. Papers 1+
Bibiotheca philologica classica 1+
Bibliothek fur philosophie 1+
Biedermann's zentralblatt fur agrikultur chemie. Ag. 49+
#Bindery Talk
Bio-chemical journal. M. 1+
Bio-chemische zeitschrift. M. 1+
Biological abstracts. Ag. 1+
Biological bulletin. B. 1+
Biologisches centralblatt. B. 30+
#B'Nai B'rith news.
Biometrika. B. 1+
Black Hills engineer 2, 3, 7. 9+
Blacksmith's journal 10+
Blackwood's magazine 1+
Blanco y negro 1926+
Bolivia 1+
#Bon ton, Le. H. E.
Book review digest 1+
Booklist 1+
Bookman. C. 2. J. 1+
Bookseller and stationery trades journal 57+
#Boston health dept. Bulletin
Boston medical and surgical journal. M. (14-75) 156+
#Boston museum of fine art. Bulletin
#Boston public library. Bulletin
Boston public library. More books
Boston society of natural history. Occasional papers (5.7)+
Boston society of natural history. Proceedings 30+
#Boston university. Bulletin
Boston university law review. L. 2+
Botanical gazette. B. 1+
Botanical magazine. B. 26+
Botanischer jahresbericht. (Just's) B. 1+
Botanischer verin der provinz Brandenburg. Verhandlungen 49+
Botanisches centralblatt B. 1+
Botanisches centralblatt. Beihefte. B. 1+
#Bowdoin college. Bulletin
Bowdoin college municipal research series 1+
Boyce Thompson institute for plant research. Contributions. Ag. 1+
Brain. M. 1+
#Brazil agricultura indutria e commercio. Boletin 5+
Breeders gazette. Ag. 1+
#Brentano's book chat
Bricklayer, mason and plasterer (4-6)+
Bridgemen's magazine 9+
British astronomical association. Memoirs. 1+
British chemical abstracts 1+
#British Columbia. Public service bulletin.
British journal of anesthesia. M. 1+
British journal of exp. biology 1+
British journal of exp. path. M. 1+
British journal of psychology 1+
British journal of psychology. Monograph supplements. 1+
British journal of surgery. M. 1+
#British library of information. Current digest
British medical journal. M. (1888-1898) 1900+
#British weekly. J.
Brooklyn botanical garden. Contributions. 1+
Leaflets. 3+
Record 5+

Brooklyn institute of arts and sciences. Science bulletin 1+
Brooklyn museum quarterly 1+
Brooklyn public library. Bulletin
Brown university. Bulletin
Brussels. Jardin botanique. Bulletin 1914+
Brussels observatory. Annales 1-7 9+
Bryn Mawr college. Monography 3. 6+
Buenos Aires. Museo nacional. Anales 9. 14. 17+
Buenos Aires. Universidad. Revista (1-5) 44+
Buffalo. University. Studies 1+
Building age. E. (22-27) 31+
Bulletin astronomique 1+
Bulletin de correspondance hellenique 1+
Bulletin des sciences mathematiques 1+
Bulletin of entomological research. Ag. 15+
Bulletin of bibliography 1+
Bulletins of American paleontology. 1+
Bureau of railway economics. Bulletin. 1-3. 5-81. 83+
Bureau of railway economics. Miscellaneous series 1, 4, 6+
Burlington magazine 1+
Butchers advocate. Ag. 68+
Bystander. J.

Caduceus of Kappa sigma 34. 38+
Calcutta university. Dept. of letters. Journal 1+
Calcutta university. Dept. of science. journal 1+
California. University. Bulletin
California. University. Library bulletin 1+
California. University. Publications—
Agricultural science 1+
American archaeology +
Botany 1+
Classical philology 1+
Economics 1+
Education 1+
Engineering
Entomology dept. bulletin 1+
Geography 1+
Geological sciences 1+
History 1+
Mathematics 1+
Modern philology (1)+
Philosophy 1+
Physiology 1+
Psychology 1+
Scripps institute. Research bulletin 1. 3+
Semitic philology 1-(3) 6+
Zoology 1+
California academy of sciences. Proceedings. (7) s. 2. v. 2. 3. 4. (5) 6 s 3 v 1+
Occasional papers 4. 10. 12+
California board of education. Bulletin (1-19) 20+
California board of health. Weekly bulletin 3+
California cultivator. Ag. 55. 58+
California grape grower. Ag. 5+
California law review. L. 1+
California mining bureau. Bulletin
California mining bureau. Mining in California 20+
California petroleum and gas dept. Summary of operations 5+
California safety news 3+
California state board of forestry. Circular 2-5, 7+
California state library. News notes of California libraries 1+
California state prison. Bulletin 4+
California university chronicle 1901+
Cambridge law journal. L. 1+
Cambridge philosophical society. Proceedings 1+
Cambridge university observatory. Astron. Observations. 1+
Campaign against tuberculosis in Iowa 2+
Canada. Dominion observatory. Publications 1+
Canada. Geological, survey. Bulletin. Mines branch 1+
Canada. Geological survey. Memoirs. Mines branch 1-2, 4-70, 71-98, 99+
Canada. Geological survey. Museum bulletin 1-17, 25, 28+
Canada. Water resources. Papers 2-4, 7-8, 10,13-14, 16, 18-26. 28+
Canada labor department. Wages and hours of labor. Report 1, 4, 6+
Canada labor gazette 1+
Canadian bar review. L. 1+

Canadian chemistry and metallurgy 1925 9+
Canadian commission on modern languages. Bulletin 1+
Canadian engineer. E. 1925+
Canadian entomologist. Ag. 1+
Canadian historical review 1+
Canadian horticulturist. Ag. 1-4. 7-8. 11. 13, 15-26. 32+
Canadian railway club. Official proc. E. 7+
Canadian society of civil engineers. See Engineering institute of Canada
Canadian tuberculosis association. Bulletin 1907-8. 1912+
Cancer. M. 1+
Canner 33+
Cape of Good Hope observatory. Annals 1+
Carnegie endowment for international peace. Pubs. 1+
Carnegie foundation for adv. of teaching. Bulletin 1+
Carnegie institute. Washington. Publications 1+
Carpenter 24+
Carroccio 17+
Case & comment. L. 15+
#Cassell's weekly. J.
Catholic charities review 1+
Catholic historical review. Wash. 1+
#Catholic register. J.
Catholic university. Bulletin 1+
#Catholic university. Patristic studies.
Studies in German
Studies in Am. church history 1+
Cattlemen. Ag. 8
Cavalry journal. Ag. 30+
Cellule. B. 1+
#Central christian advocate. J.
Central law journal. L. 1+
Centralblatt fur allgemeine pathologie. M. 11+
Centralblatt fur bakterologie. Abth 1. Referate. M. 1+
Centralblatt fur bakterologie. Abth. 1. Originale. M. 1+
Centralblatt fur bateriologie. Abth. 2 7+
Centralblatt fur innere med. 22-24+
Century. Cop. 2. E. 1+
Cereal chemistry. H. E. 1+
#Ceramic studio. H. E.
Certified public accountant. Bul. (2) 3+
#Charm. J.
Chase economic bulletin 1+
Chemical abstracts 1+
Chemical and metallurgical engineering. E. 2+
Chemical news 1+
Chemical review 1+
Chemical society. London. Journal 1-14. 21+
Chemical society of Japan. Bulletin 1+
Chemicals. E. 1+
Chemie der zelle. Ag. 11+
Chemiker-zeitung 26+
Chemische industrie 45+
Chester white journal. Ag. 9+
#Chester white post. Ag.
Chicago art institute. Bulletin 1. (2-4) 5+
Chicago dairy produce. Ag. 13+
Chicago health department. Bulletin 7+
Chicago municipal tuberculosis sanatorium. Bulletin 1+
Chicago public library. Book bulletin 2+
Chicago Schools journal 5+
#Chicago theological seminary register
#Chicago University. Quarterly announcements
Chicago. University. Yerkes observatory. Pubs. O. 1+
Chicago university record 1+
Child 4+
#Child life. J.
Child welfare magazine 18+
Childhood education 1+
#Children's newspaper
Chile 1+ 1926+
Chile. Universidad. Anales 81. 83-85. 87-89. 99. 103-114. 116+
Chilton tractor journal. Ag. Cop. 2. E. 12+
Chinese students monthly. J. 9+
Choroby i szkodniki roslin 1+
#Christian century
Christian educational magazine 1-8 (9-13) 13+
#Christian herald

Christian leader
Christian missionary
Christian observer
Christian register
Christian standard
Christiana universitet. Bibliotekets. Aarbok 1897+
Christiana universitet hist. sem. Avhandlinger 1+
Christiana bidrag til nordesk filologi 1-6
Chronique des arts 1910+
Churchman. J.
Cigarmaker's official journal 31+
Cincinnati. Sanitary bulletin (1-6) 7+
Circolo matematico di palermo. Rendiconti 1+
Citator. Missouri edition. L.
City managers magazine 5+
City record. Cleveland 2+
Classic
Classical journal 1+
Classical philology 1+
Classical quarterly 1+
Classical review 1+
Classical weekly 1+
Coimbra universidade. Museu zool. memorias 1+
Collier's national weekly. Cop. 2. J. 42+
Colorado college publications
  # Bulletin series
  Language series 1+
  Science series 1+
  Social science series 1+
Colorado scientific society. Proceedings 1+
Colorado fuel and iron co. Industrial bulletin 6+
Colorado geological survey. Bulletin 1+
Colorado school of mines. Quarterly 1912+
Colorado state entomologist 1+
Colorado. University. Bulletins
Colorado. University. Studies 1+
Colorado. University. Historical collections 1+
Colour 9, 11+
Coltivatore. Ag. 66+
Columbia law review. L. 1+
Columbia university. Adams fund publications 1. 3. 5. 7. 9+
Columbia university. Bulletin of information
Columbia university. Studies in history, economics and public law 1+
Columbia university. Teachers college. Contributions 1+
Columbia university. Studies in romance philology and lit. 1+
Combustion. E. 1+
Commerce monthly 1+
Commercial and financial chronicle 24+
Commercial fertilizer. Ag. 1-7, 10-16. 18-19. 21-23, (24) 25+
Commercial index. J.
Commonweal. C. 2. J. 1+
Comparative psychology. Monographs 1+
Compressed air. E.
Congo Belge. see Kongo Belge
Concerning Stanford (1) 2+
Concrete highway engineer. E.
Congregationalist. J.
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Alpha Aids
American Builder 1+
American Electro-Chemical Society. Trans. 1+
American Gas Engineering Journal 97+
American Institute of Electrical Engineers. Journal 40+ Trans. 1-2, 4-6, 8+
American Machinist 14-27, 29+
American Society of Civil Engineers. Trans. 1+
American Society of Heating & Ventilating Engrs. Journal 1+
American Water Works Association. Journal 1+
Associated Engineering Societies. St. Louis. Journal 1+
Atlantic Monthly
Auburn Engineer
Automotive Industries 1+
Aviation 1+

Bell System technical journal 1+
Bell Telephone Quarterly 1+
Building Age (22-27) 31+

The Canadian Engineer. 1925+
The Canadian Railway Club. Proceedings 7+
Century
Chemical and Metallurgical engineering 2+
Chemicals 30+
Combustion
Compressed air. Magazine
Concrete Highway Engr.
Construction
Cornell Civil Engineer 1+

Du pont Magazine
Electrical Journal 1+
Electric Railway Journal 16+
Electric Traction 1925+
Electrical World 5+
Electrician 1+
L'Electricien S 2 V. 11-12, 19+
Elektrische Nachrichten Technik 24+
Elektrotechnik und Maschinenban 28
Elektrotechnische Zeitschrift 1+
Engineer (London) 106+
Engineering (London) 3-45, 47-73, 75-77. 79+
Engineering and Mining Journal 53-58, 62, 71-85, 93+
Engineering Contracting 27+
Engineering Foundation—Publications. 1+
Engineering news-record. 5+
Engineering Progress 1925+
Engineers and Engineering +
Explosive Engineer. 1+

Gas und wasserfach 1923+
General Electric Review 11+
Genie civil 26-44, 47+
Gesundheits ingenieur 23+
Good Roads 36+
Graphite 7, 10+

Harper's magazine
Heating and Ventilating magazine 1+

Ice and Refrigeration 2+
Illuminating Engineer. 7+
Illuminating Engineering Society. Transactions. 5+
Industrial Arts Index 1+
Industrial Engineer. 54+ Contin. of El. Review
Industrial Management 1+
L'Industrie electrique 19+
Industry. Illustrated 1+
Ingenieria 20+
Institute of radio engineers. Proceedings 1, 2+
Institution of Civil engineers. Proceedings 1+
Institution of Electrical Engrs. Journal 1+
Institution of Mech. Engrs. Journal 1+ Proceedings 1847-1901, 1903+
Iron Age 65

Journal of Electricity 50+
Journal of Engineering Education 1+

Literary Digest,

Machinery. Engineering Ed. 74+
Mechanical Engineering. 1+
Michigan technic (6-23,) 35+
Military Engineer. 12+
Mining and Metallurgy 1+
Mitteilungen a. d. material prufungsamt z. gross lichterfelt.
Motor Life 9+
Municipal and County Engineering 4-9, 11+

National Electric light Ass'n. Monthly bulletin. N S V. 8+. Proc. 1885-91, 1893-1898+
New England Water Works Association. Journal. 1+

Outlook 41-42, 45-53, 55+

Popular Mechanics 13+
Popular Radio.
Power 15-20, 23+
Power Plant Engineering 21+
Professional Engineer 1+
Public Roads 1+
Public Works 1-20, 22, 24+

Q. S. T. (devoted entirely to amateur radio) 1923+

Radio 6+

Railway Age 15+
Railway Mechanical Engineer. 76+
Refrigeration. (Incorporating Ice) 12+
Revue Generale de L'Electricite 1+
Rock Products 1+

Science Abstracts. 1909+
Scientific American 1+
Sibley Journal of Engineering 24+
Societe Francaise D'Electricite. Bulletin S 2 V. 10+
Southern Power Journal
Stone and Webster's Journal 1+
Successful Methods—Construction Service
Surveyor 1+

Technology Review 1+
Telephony 59+
Travelers Standard 1+

Verein deut. ingenieure. Zeitschrift 17-22, 24-35, 44+

Water Power
Western Society of Engrs. Journal 1+
Wisconsin Engineer 15+
Wood Preserving News 1+
World's Work

JOURNALISM LIBRARY

The periodicals listed below are received currently. Only those which are bound and shelved in the Journalism library have the volumes indicated after the titles

Advertising Weekly (London)
Advertising Fortnightly.
Advertising Sales Promotion.
Advertiser's Weekly.
American Boy.
American Magazine
American Mercury.
American Pressman 32+
American Printer. 1+
American Review of Reviews.
Argonaut
Asia. 18-22, 24+
Asiatic Review
Associated Advertising.
Atlantic Monthly.
Author and Journalist 1925+

Baptist.
Bookman.
British Weekly
Bystander

Cassell's Weekly
Central Christian Advocate.
Century Magazine.
Charm
Child Life.
Chinese Student Monthly.
Christian Century.
Christian Standard.
Christian Herald.
Christian Observer.
Churchman.
Classic.
Collier's Natl. Weekly.
Commonweal.
Commerce Monthly
Continent, The
Congregationalist.
Country Gentleman.
Country Life in America
Current History Magazine.

Dry Goods Economist
Drygoodsman

Editor. 27+
Editor and Publisher. 8+

Florida Newspaper News.
Forecast.
Forum.
Fourth Estate. 1909+

Garden and Home
Garden Magazine.
Golden Book, The
Good Housekeeping.
Graphic

Harper's Magazine.
Hearst's International Monthly.

Holland Magazine.
House and Garden.
House Beautiful.

Illustrated London News
Independent.
Inland Printer. 1+
Intercollegian.
Intermountain Press.
Iowa Journalist.

Jewish Voice.
John Martin's Book.
John O'London's Weekly
Journalism Bulletin.
Journalist, The

Ladies Home Journal.
Liberty Magazine
Life.
Literary Digest.
Littell's Living Age.

McNaught's Monthly.
Matrix. The
Merchants Trade Journal.
Mine Host
Monthly Summary of League of Nations.
Mid-Pacific, (Honolulu)
Midwest Printer and Publisher.
Missionary Review of the World.
Missouri Ruralist.
Motion Picture Magazine.
Motor.
My Magazine

Nation. 1+
National Geographic Magazine.
National Printer-Journalist. (6-10) 26+
Nation's Business.
Needlecraft.
New Republic.
Newspaper World
North American Review.

Official Postal Guide, and Supplement.
Official Railway Guide.

Our Dumb Animals.
Our World.
Outdoor American.
Outdoor Life. (See Journal of the outdoor life)
Outlook.

Pacific Printer and Publisher. 13+
Pictorial Review.
Photo-Engraver's Bulletin
Pointers.
Pollock's Newspaper News.
Popular Radio.
Poster, The 6+
Printer's Ink (Monthly) 5+
Printer's Ink (Weekly) 66+
Printing Art and Sample Book. 1+
Public Opinion
Publisher's Auxiliary.

Readers Digest.

St. Nicholas.
Saturday Evening Post.
Saturday Review.
Scholastic Editor.
School Journalist.
Scribner's.
Sketch
South African Journalist
Southern Printer
Spectator
Sphere
Success Magazine.
System.

Theatre Magazine.
Time.
Trans-Pacific. (Japan)
United States Publisher.

Vanity Fair.
Vogue.

Woman Journalist, The
Writer, The 1-8, 34, 36+
Writer's Digest.
Writer's Monthly. 23+
World Tomorrow.
World Traveler.
World's Work.

LAW LIBRARY

American bar association. Journal 1+
American digest (advance sheets)
American Federationist 9+
American journal of international law 1+
American judicature society. Journal 1, 4+
American law review 1+
American law school review 1+
Atlantic reporter (advance sheets) 1+

Boston university law review 2+

California law review 1+
Cambridge law journal 1+
Canadian bar review 1+
Case and comment 15+
Central law journal 1+
Citator. Missouri edition
Columbia law review 1+
Cooperator
Cornell law quarterly 1+
Docket
Dominion law reports 1+

Federal reporter (advance sheets)

Georgetown law journal

Harvard law review 1+

Illinois law review 1+
Index to legal periodicals 1+
Iowa law bulletin 1+

Journal of comparative legislation and international law 1+
Journal of criminal law and criminology
Juridical review 1+

Kentucky law journal 6+

Law notes 20+
Law quarterly review 1+
Law reports—
  # Appeal cases (advance sheets)
  Chancery division (advance sheets) 1+
  # Current digest
  # King's bench & probate division (advance sheets)
  # Statutes
Law review. University of Detroit
Loyola law journal

Marquette law review 1+
Massachusetts law quarterly 7+
Michigan law review 1+
Minnesota law review 1+

Nebraska law bulletin 1+
New York supplement (advance sheet)
North Carolina law review 1+
Northeastern reporter (advance sheet)
Northwestern reporter (advance sheet)
Notre Dame lawyer 1+
Oregon law review 1+
Owl of Sigma Nu Phi

Pacific reporter (advance sheets)
Prescript of Gamma Eta Gamma
Public utilities reports 1915+

St. Louis law review 2+
Scots law times 1+
Scottish law review 1+
Shepard's citations—1+
  Atlantic reporter
  Federal
  Illinois
  Massachusetts
  Missouri
  New Jersey
  N. Y. classified topical index
  N. Y. court of appeals
  Northeastern reporter
  Pacific reporter
  Pennsylvania supreme court
  Southern reporter
  Southwestern reporter
  United States
South Carolina law reports. (advance sheets)

Texas law review 1+

United States statutes citer-digest
United States supreme court reporter (advance sheets)
University of Pennsylvania law review 1+

Virginia law review 1+

Weekly notes. London
West Virginia law quarterly 24+

Wisconsin law review 1+

Yale law journal 1+

MEDICAL LIBRARY

Acta medica Scandinavica. 56-59, 61+
American anatomical memoirs. 1+
American journal of anatomy. 1+
American journal of diseases of children. 11+
American journal of hygiene. 1+
American journal of nursing. 3+
American journal of medical sciences. 1-9, 12-15, 17 N S V. 15, 16, 19-84, 87, 91, 93+
American journal of pathology. 1+ (formerly journal of medical research)
American journal of pharmacy. 1+
American journal of physiology 1+
American journal of public health. 1+
American journal of Roentgenology and Radium Therapy. 1+
American journal of surgery. 1+
American journal of Syphilis. 2, 4+
American journal of tropical medicine. 1+
American medical association. Journal. 16, 18+
Anatomical record. 1+
Anatomischer Anzeiger. 1+
Anesthesia and analgesia current researches. 1+
Annales de medicine. 7+
Annals of clinical medicine. 1+
Annals of medical history. 1+
Annals of surgery. 1+
Archiv. fur anatomie u. physiologie. 1+
Archiv. fur die gesammte physiologie (Pluger's). 1+
Archiv. fur exper. path. u. pharmakologie. 78+
Archiv. fur gynaekologie. 1+
Archiv. fur hygiene. 72-84, 88+
Archiv. fur kinderheilkunde. 36-66, 68+
Archiv. fur klinische chirugie. 104+
Archiv. fur mikroskopische anatomie. 1+
Archiv. fur path. anatomie (Virchow) 1+
Archives d'anat. microscopique. 1+
Archives des maladies du coeur. 1923 1+
Archives int. de pharmacodynamie. 1+
Archives internationales de physiologie 7+
Archives italiennes de biologie 1+
Archives of internal medicine. 1+
Archives neerlandaises de physiologie. S 2 V. 1-15: S 3 V. 3+
Archives of opthalmology. 1+
Archives of Pathology and Laboratory medicine. 1+
Archives of occupational therapy. Now Occupational Therapy and rehabilitation
Archives of Surgery. 1+
Archivio di farmacologia sperimentale. 9+
Archivio di fisilogia. 1+
Archivio italien di anat. & embryol. 1+

Beitrage zur path. anat. 1+
Biochemical journal. 1+
Biochemische Zeitschrift. 1+
Boston medical and surgical journal. (14-75) 15 6+
Brain 1+
British journal of anesthesia. 1+
British journal of experimental pathology. 1+
British journal of surgery. 1+
British medical journal. (1888-98) 1900+

California University publications—physiology. 1+
Cancer. 1+
Centralblatt fur allgemeine pathologie. 11+
Centralblatt fur bakteriologie. Abst. 1 originale. 1+
Centralblatt fur bakteriologie. Abst. 1 Referate. 1+
Centralblatt fur innere med. 22, 24+
Chemical Abstracts (Gift) 1+

Deut. archiv. f. klinische med. 1+
Deutsche medizinische wochenschrift. 3-42, (43) 44, (45) +
Deutsche zeitschrift fur chirurgie. 97-101, 129+

Endocrinology. 1+

Heart. 1+
Hygeia. 1+

Index Medicus 1+
Institut Pasteur. Annales. 1, 1+
Institut Pasteur. Bulletin 19+

Japan Medical World (Gift)
Johns Hopkins hospital. Bulletin. 1+
Journal de physiologie et de path. generale. 1+
Journal of anatomy 21+
Journal of bacteriology. 1+
Journal of biological chemistry. 1-10. 22-23. 25-27. 30-49. 52+
Journal of cancer research. 1+
Journal of clinical investigation. 1+
Journal of comparative neurology. 1+
Journal of experimental medicine. 1+
Journal of general physiology. 1+
Journal of hygiene. 1+
Journal of industrial hygiene. 1+
Journal of immunology. 1+
Journal of infectious diseases. 1+
Journal of laboratory and clinical medicine. (1-2) +
Journal of metabolic research. 1+
Journal of nervous and mental diseases. 35-43, 45+
Journal of obstetrics 1+
Journal of parasitology. 1+
Journal of pathology and bacteriology. 1+
Journal of pharmacology and exp. therapeutics. 1+
Journal of physiology. 1+
Journal of radiology. 3+
Journal of state medicine. 20+
Journal of urology. 8+

Kinische wochenschrift. 1+

Lancet 1823-4, 1827-9, 1842-4, 1847-62, 1864-68, 1871+

League of nations. Epidermology report. Health section. 1+

Medical journal and record. 1+
Medicine. 1+
Military surgeon. 53+
Missouri state medical assn. journal. 1+
Modern hospital. 1+
Munchener medizinische wochenschrift. 1+

Nation's health. 1+

Occupational therapy 1+
Office international di hygiene publique. Bulletin 12+

Parasitology. 1+
Physical Therapy X-Ray Radium 1+
Physiological abstracts. 1, 6, 8+
Physiological reviews. 1+
Public health journal. 4+
Public health nurse. 10+
Public health reports.

Quarterly cumulative index to current medical literature. 1+
Quarterly journal of experimental physiology. 1+

Radiology. 1+
Revista sud-Americana d'indocrinologie. 1923+
Royal Society of Medicine. Proceedings. 16+

Skandinavisches archiv. fur physiologie. 1+
Societe de Biologie, Comptes Rendus des Seances. 36-40..42, 45, 47-52, 54+
Society for experimental biology. Proceedings. 1+
Surgery, Gynecology and Obstetrics. 38+

Tohoku journal of experimental medicine 1+
Tokyo University. Mitteilungen. a. d. med. facultat 6+
Trained nurse and hospital review. 45-48. 51+

U. S. Veterans' Bureau Bulletin 1+

Virginia Medical Monthly 7+

Welfare Magazine 1+
Western Medical Times (Gift)

Zeitschrift fur allgemeine physiologie. 1+
Zeitschrift fur biologie. 1+
Zeitschrift fur des gesamte anatomie. 1+
Zeitschrift fur hygiene. 1+
Zeitschrift fur immunitatisforschung. 1+
Zeitschrift fur kinderheilhunde 1, 2, 4. 20+

Zeitschrift fur klinische medizin 1-87, 89+
Zeitschrift fur konstitutionslehre. 1+
Zeitschrift fur morphologie u. anthropologie. 1+
Zeitschrift fur physiologische chemie (Hoppe-Seyler). 1+
Zeitschrift fur Zellforschung und Mikroskopiche anatomie 1+
Zentralblatt fur innere medizin. 22, 24+

Part II
Check List of Student Serial Publications

University of Missouri
Compiled by
JOHN HERMAN DOUGHERTY

Abbreviations Used
H—State Historical Society Library
M—The University library

a—annual	d—daily
b-w—bi-weekly	m—monthly
b-m—bi-monthly	q—quarterly

The letters followed by figures and dates indicate the volumes and numbers in possession of the two libraries:

Andiron Magazine. a. 1910. vol. 1.
Published by "The Andiron Club". Edited by John Robert Moore M 1 — H 1

Argus. m. $1.00, single copies 10c. Jan. 1881—Dec. 1896, Vol. 1-16. Vol. 1-9. No. 4 was University Argus. Published by Bliss Lyceum, Athenaean and Union Literary societies.

M	Vol. 10 nos. 1-4	H	Vol. 1 nos. 1-5
	11 nos. 1-4		2 nos. 1-4
	12 nos. 1-10		3 nos. 1-4
	13 nos. 1-8		4 nos. 1, 3-4
	14 nos. 1-8		5 nos. 1-5
	15 nos. 1-8		6 nos. 1-4
	16 nos. 1-2		7 nos. 1-5
			8 nos. 1-4
			9 nos. 1-5
			10 nos. 1-4
			11 nos. 1-5
			13 nos. 1-8

Asterisk. a. May 1904-Dec. 1905; April 1909-May 1910. Vol. 1-4. Suspended 1906-1908. Vol. 1-2 published by the "Asterisks", Vol. 3-4 by the Asterisk and Andiron clubs.
Editors: Vol. 1 L. Rutledge Whipple
Vol. 2 Homer Croy
Vol. 3 Eber E. Chiles
Vol. 4 Charles C. Byers
M 1-4 H 1-4

College Farmer. m. 50c—$1.50. Mar. 1904+
Vol. 1-9, no. 2 as Mo. Ag. College Farmer. Suspended December 1917 to September 1921. Same volume number resumed. Subs. $1.00
Editors: Vol. 1. 1904-05 J. Lee Hewitt
Vol. 2. 1905-06 F. L. Kelso; W. A. Cochel
Vol. 3. 1906-07 W. A. Cochel

Vol. 4. 1907-08 E. A. Cockefair; O. E. Reed
Vol. 5. 1908-09 O. E Reed; H. R. Nelson
Vol. 6. 1909-10 H. R. Nelson; W. M. Landess
Vol. 7. 1910-11 E. G. Woodward
Vol. 8. 1911-12 C. C. Wiggins
Vol. 9. 1912-13 George F. Jordan
Vol. 10. 1913-14 Ernest M. Todd
Vol. 11. 1914-15 Ben F. Geisert
Vol. 12. 1915-16 E. H. Hieiskemper
Vol. 13. 1916-17 G. W. Catts
Vol. 14. 1917-18 F. L. Clinefelter
Vol. 15. 1921-22 M. E. Ewing; C. W. Davis

M 1+ H Vol. 1, nos. 1-2, 4-5, 7-12
Vol. 2, nos. 1, 3-8, 10-12
Vol. 3, nos. 1-12
Vol. 4, nos. 1-12
Vol. 5, nos. 1-8, 10-12
Vol. 6, nos. 1-12
Vol. 7, nos. 1-2, 4-12
Vol. 8, nos. 1-12
Vol. 9, nos. 1-12
Vol. 10, nos. 1-3, 6-10
Vol. 11, nos. 1-10
Vol. 12, nos. 1-10

Collegian. m. Jan. 1858-May 1858?
Published by the Athenaean and Union Literary societies
Editors: March 1858 Emilius P. Lambkin
April 1858 U. M. Young
May 1858 J. D. Nunnelly
M March 1858
April 1858
May 1858

Columns. b-w. 75c; Single copies 5c. March 1-April 1, 1912
Published by students. Edited by Samuel Ayres, Jr. M vol. 1, nos. 1-3

Daily Hush. n. d. No. 1. Edited by Wiene Wurst
H 1.

Daily Missourian. d. Free. April 6-10, 1908. Vol. 1, nos. 1-5
Published by students as an experiment. Edited by H. E. Kilmer.
H Vol. 1, nos. 1-5

Debater's Greensheet. b-m. Sept. 24, 1923. Vol. 1, no. 1
Published by the M. S. U. debating society.
Edited by Nathan Ladinsky.
M Vol. 1, no. 1

Docket. a. 15c April 1908-May 1912. Vol. 1-5
Published by law students.

Edited Vol. 1 by Floyd E. Jacobs
Vol. 2 by Harry G. Hunt
Vol. 3 by E. W. Clausen
Vol. 4 by Edwin W. Patterson
Vol. 5 by Lee Walker
H 1-5

Electric Light. Mar. 29, 1883.
H 1

Engineering quarterly. q. $1.00. Single copies 35c.
Dec. 1906-May 1911. ?. Vol. 1-5
Published by Engineering society.
Edited Vol. 1 by Fred H. Krog
Vol. 2 by W. J. McMinn
Vol. 3 by W. G. Schmauder
Vol. 4 by R. E. Dudley
Vol. 5 by C. E. Sexton
M 1-5 H Vol. 1 no. 1-3
Vol. 2 no. 1-4
Vol. 3 no. 1-4
Vol. 4 no. 1-2, 4
Vol. 5 no. 1, 3

Independent. b-w. 75c, then $1.00; copies 5c
Mar. 3, 1894-Sept. 21, 1910. Vol. 1-18
Vol. 1-13 as M. S. U. Independent. Published by M. S. U. Barbs; later by representatives of all the student body.
Edited Vol. 2 by Albert J. McCulloch
Vol. 3 by J. S. McIntyre
Vol. 4-5 by M. H. Pemberton
Vol. 5-6 by M. H. Pemberton; W. K. Moore; Frank Y. Gladney
Vol. 7 by J. F. Conran
Vol. 8 by Walter L. Howard
Vol. 9-10 by W. T. Nardin
Vol. 11 by Dan McFarland
Vol. 12 by Earl F. Nelson
Vol. 13-14 by Redmond S. Cole
Vol. 15 by William Cross
Vol. 16 by Edwin N. Patterson
Vol. 17 by R. A. Smith
Vol. 18 by C. C. Byers

M Vol. 3, nos. 1-18
Vol. 4, nos. 1-16
Vol. 5, nos. 1-7
Vol. 6, nos. 1-7, 16
Vol. 8, nos. 1-16
Vol. 9, nos. 1-31
Vol. 11, nos. 1-33
Vol. 12, nos. 1-32
Vol. 13, nos. 1-32

H Vol. 2, nos. 1-17
Vol. 3, nos. 1-18
Vol. 4, nos. 1-16
Vol. 5, nos. 1-7
Vol. 6, nos. 1-7, 16
Vol. 7, nos. 1, 7, 10, 12, 16
Vol. 8, nos. 1-16
Vol. 10, nos. 1-30
Vol. 11, nos. 1-33

Vol. 14, nos. 13, 24
Vol. 15, nos. 1-31
Vol. 16, nos. 1-32
Vol. 17, nos. 1-32

Vol. 12, nos. 1-33
Vol. 13, nos. 1, 3, 5, 7, 11, 27, 29, 30, 32-33
Vol. 14, nos. 1-33
Vol. 15, nos. 1-33
Vol. 16, nos. 1-32
Vol. 17, nos. 1-32
Vol. 18, no. 1

Graft. Dec. 12, 1905
H 1

Knocker. m. $1.00 May 1901
Published and edited by W. H. Seward for the Society of Knockers by the Hammerwell press.
H 1

Mirror. a. 1908
Published by the Senior class of 1908
Editor: Reuben E. Lucas
H 1

Missouri Agricultural College Farmer (see College Farmer)

M. S. U. Index. a. 1891. Vol. 1
Published by the M. S. U. Athletic Ass'n with the cooperation of the fraternities and literary societies. Edited by Curtis Hill
M 1 H 1

M. S. U. Independent (See Independent)

Missouri Outlook m. April 1915-Feb. 1916? Vol. 1, nos. 1-5
Published by students. 75c; 10c a copy.
Edited by William G. Simrall; Roscoe Ellard
M Vol. 1, nos. 1-5 H Vol. 1, no. 1-4

Missouri Scroll. Feb. 1926—date Vol. 1+. 25c a copy
Published by Sigma Delta Chi, journalism, fraternity of University of Missouri.
Editors: Vol. 1, no. 1. Joe Alex Morris. Feb. 1926
Vol. 1, no. 2. B. P. Bolton. Mar. 1926
M Vol. 1, nos. 1-2 H Vol. 1, no. 1-2

Missouri Student. w. Sept. 14, 1926—date Vol. 1+
Published as the official newspaper of the U. of M. as a supplement to the Columbia Evening Missourian.
Editor: Fred May
M Vol. 1, nos. 1-date H Vol. 1, nos. 1-3, 5-6

M. S. U. Tiger. w. 50c a semester; 5c a copy. Jan. 1894-May 1, 1895 Vols. 1-2
Published by fraternity students of University of Missouri.

Editors: Vol. 1 J. W. Wight
Vol. 2 W. T. Jones; Geo. J. Stampfli
M Vol 2, nos. 7, 14, 16-17, 19, 23-24, 28. H Vol. 1 nos. 5, 7-8

Missouri University Magazine. m. ? $1.00. Sept. 1878-May 1880 Vol. 1-2
Published by the young lady students of the U. of Missouri
Editors: Vol. 1 1878-79 Unknown
Vol. 2 1879-80 Josie B. Latham
M Vol. 1 nos. 2-3 Vol. 2 no. 4 May 1880

Mulife. w. Sept. 11, 1923-Oct. 26, 1923. Vol. 1, nos. 1-4
Published by the students of the University of Missouri; official organ of student body
Editors: Vol. 1 1923 F. B. Hailey
M Vol. 1, no. 1, 4. H Vol. 1, nos. 1-4

Nymph. H has one undated unnumbered issue

Octopus. Oct. 10, 1914. Vol. 1. 10c a copy
Published by students in the Univ. of Missouri
H Vol. 1, no. 1

Ore y Negro. w.? Jan. 1922-April 1922?
Published by Spanish-American students of U. of M.

Outlaw. m. $1.50. Sept. 1924—date. Vol. 1 to date
Published by the students of the Univ. of Missouri College Humor Company published Vol. 3, nos. 1+
Editors: Vol. 1 1924-25 Claude H. Binyon; James H. Nash
Vol. 2 1925-26 James H. Nash; Charles E. Chapel
Vol. 3 1926-date Mylton L. Kennedy
M Vol. 2, nos. 1-6, 8.
H Vol. 1, nos. 1, 2, 4-6
Vol. 2, nos. 1-8
Vol. 3, nos. 1, 4

Oven. m. 50c; 75c; 10c a copy. 1904-May 1913. Vol. 1-9
Published by students
Editors: Vol. 1 1905 Will Paddlesumsky
Vol. 2 1906 Fred H. Krog
Vol. 3 1906-7 Fred H. Krog; Homer Croy (assoc. ed.)
Vol. 4 1907-8 Orrick Johns; J. F. Hogan; E. W. Clausen
Vol. 5 1908-9 Harry G. Hunt
Vol. 6 1909-10 Louis A. Stigall
Vol. 7 1910-11 Orville Zimmermann
Vol. 8 1911-12 Jedson Sanderson
Vol. 9 1912-13 G. C. Willson
M Vol. 3, nos. 1, 8
Vol. 4, nos. 1-9
Vol. 5, nos. 1-9
Vol. 6, nos. 1-7
Vol. 7, nos. 1-6
H Vol. 1, nos. 1
Vol. 2, nos. 3
Vol. 3, nos. 1-9
Vol. 4, nos. 1-9
Vol. 5, nos. 1-9

Vol. 8, nos. 1, 2, 7
Vol. 9, nos. 1-4

Vol. 6, nos. 1-8
Vol. 7, nos. 1-6
Vol. 8, nos. 1-4, 6
Vol. 9, nos. 1-9

Owl. Dec. 19, 1919. Vol. 1. Published by students of the University of Missouri.
Editor: George C. Willson
H Vol. 1, nol 1

Panhellenic. b-w. $1.00; 10c a copy. Feb. 15, 1890-Apr. 30, 1891. Vol. 1-2
Published by Sigma Nu, Zeta Phi and Phi Delta Theta fraternities (Sigma Alpha Epsilon and Kappa Kappa Gamma collaborated on three last nos.)
H Vol. 1, nos. 1-3, 6-8
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St. Patrick's Survey. a. March 17, 1923.
Published by the American Civil Engineer's society of Univ. of Missouri.
H March 17, 1923

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Senior Farmers' Memorial Volume. a. May 1912
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Tiger Independent (took volume number of the M. S. U. Independent, which sus-

pended with Volume 18, 1910) w. 5c a copy. Feb. 8, 1926-Mar. 13, 1926. Vol. 18.
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Editor: Volume 18, 1926. S. Wolfe Eichel.
M Vol. 18, nos. 1-3. H Vol. 18, nos. 1-4, 6

Tiger Lily. April 6, 1901. Vol. 1, no. 1. Published by the young lady students of the Univ. of Missouri.
Editor: Elizabeth Gentry
M Vol. 1, no. 1 H Vol. 1, no. 1

Torquemada. w. Sept. 1897-Feb. 1898. (Printed in St. Louis)
Published by students in the University of Missouri
Editor: Shannon Mountjoy.

University Bumble Bee. June 6, 1879.
Published and edited by B. S. Newland
H June 6, 1879.

University Missourian. a. free. Nov. 1915+
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Editors: Nov. 25, 1915 The Devil
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Varsity Life. m. 10c a copy. Oct. 1911-Jan. 1912. Nos. 1-4
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Y Worker. Free. April 1926. Vol. 1, no. 1.
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